HOW-TO FOR THE AUDIOVISUAL PROFESSIONAL

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WHO'S MINDING THE MEDIA?

Interested in contributing?

We're looking for practical, how-to stories on using personal computers in audiovisual production. We don't just want to hear about your successes — some of the most important lessons come from the mistakes and dead ends that happen along the way to a great piece of work.

Please send your story ideas to us via mail or e-mail. If you'd like to send a complete story, please submit it on disk or via e-mail.

We're also eager for your material for our news features.

Suggestions? We welcome them. We're planning projects such as more training seminars and an electronic bulletin board services to exchange tips and ideas. What do you think?

Introductory offer extended

WE ARE EXTENDING THE INTRODUCTORY SUBSCRIPTION price of $150 for 24 issues of *Mind over Media,* partly because we haven't really been able kept up with the amazing demand for sample issues. The number of subscribers is exceeding our expectations, but at the same time, we realize that many of you are with young companies (or young divisions of old companies) and don't have big budgets yet. We'd like to make sure that sample copies are received by everyone who wants them, with enough time to take advantage of our offer.

Meanwhile, we're working on obtaining more "extras," like the Meridian Data CD-Audio disc that subscribers are now receiving. What would you like? Some of the possibilities are VHS videotapes that show the video capabilities of various hardware and software products, as well as demo disks for multimedia tools. Let us know what you think.

Information navigation interfaces

The story on the facing page, by Charles Wyke-Smith, is an example of a trend that we recognized over the past few months — a recognition that the interfaces that work for tool-oriented computer software (word processors, databases, spreadsheets, etc.) don't often work well for finding information.

From the December issue of our sister publication, *Multimedia Computing & Presentations:*

Audiovisual glitz and glamour without depth of information is just more television. Multimedia computing can attract people's attention and hold their interest, but unless it also gives them good ways to find out more about the things that interest them, it's just more sensory overload.

An information navigation system is essential. We've grown increasingly convinced that consistency of the navigation interface will be a key to growth in multimedia information products, the so-called "content-rich" products that'll trigger sales of computers to entirely new groups of customers.

The lesson that Apple taught the world with Macintosh was that a consistent interface will increase the number of applications that people regularly use.

Even though the computer industry as a whole has recognized the value of consistent user interfaces, there's a new kind of consistency that's needed — standard interfaces for *information navigation.* The easy way to understand this is to think about how difficult you'd find libraries to use if each one used a different card catalog system — not to mention those who would insist that the whole card catalog metaphor is wrong. Multimedia promises to put libraries, art museums and all sorts of other information on our bookshelves. If each one has a difference navigation scheme, people won't buy very many.

The theory behind content-rich applications is that they'll sell like books, in large numbers at low prices. The implication is that buyers will go back again and again for titles. Just as nearly everyone has at least a few books, nearly everyone will have a few titles. A dozen would seem reasonable — but that's about twice as many titles as the number of software applications most computer owners use regularly. Of course, many people buy far more than a dozen books. And there are many, many libraries, where people use thousands of books.

Nick Arnett
President, Multimedia Computing Corporation

The one-button interface

INTERFACE   Information navigation requires new kinds of interfaces

by Charles Wyke-Smith

I THINK WE'VE DEFAULTED. We designers of multimedia have taken the metaphor of the modern computer interface as our own rigid guideline in designing interfaces for interactive programs: We use multiple-choice buttons, scrolling fields, even pull-down menus as the navigation tools. We use a mouse or rollerball as the means to operate them.

Such interfaces require at least some training, be it delivered by a trainer, self-taught or from reading a manual. This learning process is worth the effort if the viewer is going to learn a foreign language or be able to regularly access a useful database of information. However, as I discovered while designing an interactive display for use at the Comdex and MacWorld exhibitions, if the viewer is standing on the floor of a noisy exhibition hall, surrounded by distractions, watching a monitor several feet away, you must offer a simpler interface.

If you assume that your typical viewers will have no computer skills, that they think "just point and click" is a line from a new Clint Eastwood movie, and are prepared to give you about four seconds of their valuable time to engage their interest, then you are getting into the right frame of mind to design multimedia for an exhibition hall. Even at computer shows, surprisingly large numbers of visitors cannot use a mouse or trackball, and those who use a display are immediately turned off if the program does not react exactly as they expect.

I suggest there are four basic considerations when designing an interface for any "passing traffic" display, be it a museum, point-of-sale in a store, or the largest trade show. They are:

1. **Clarity.** The interface must clearly indicate exactly what information it offers. "Experience flight in Space!" and a large color picture of the shuttle tells us exactly what to expect. Keep it simple and clear so it's eye-catching in its surrounding. Save the subtlety for later, once the viewer is involved.

2. **Responsiveness.** Exhibition visitors, shoppers and gallery visitors are a restless breed. Make sure when they decide "OK, I'll try it", something happens—anything, as long as is happens immediately. If you are going to show the viewer a clip from a laserdisc, have some music play or a simple

animate happen until the clip starts, even if the wait only lasts a few seconds. If you are going to use the easy option and pop a "Please wait" on the screen, don't make the viewer wait too long; from my experience you have about five seconds before the more easily distracted viewer decides there is a problem and moves on.

3. **Consistency.** Organize things so that the viewer learns as they go; if the Quit button is in the lower left corner the first time it becomes an option, don't have it appear as a different shape button or in top right corner next time it appears. Consistent use of buttons, type, and transitions orients the viewers, and keeps their attention.

4. **Navigability.** Make sure that users can find their way around and don't get lost in "hyperspace", not knowing where they came from or where they are going. It should be easy to return to the beginning or go backwards, retracing their steps. Sometimes, it's appropriate to provide the viewers with a small map that they can call up to aid with navigation. See your HyperCard Help stack for a nice example of this.

I've seen Macintosh novices at our training courses arduously trying to master the mouse, so I decided not to use a point-and-click system for the Comdex project. I wanted something simpler than a mouse and it occurred to me that maybe the user could navigate with just a single button. Instead of having users click at a particular *location*, they would click at a particular *time* to make their navigation choices. Armed with this simple concept, we came up with an interface that fit our four design criteria.

The interface

Our client, Jeff Segers of Mass Optical Storage Technologies Inc. (MOST), had asked us to show a number of aspects of the company's new 3-1/2-inch 128MB magneto-optical disk drive. We divided the information into six groups; technology, the media, the future, etc. Six is as many choices as the viewer can take in at one time and there are empirical studies that show
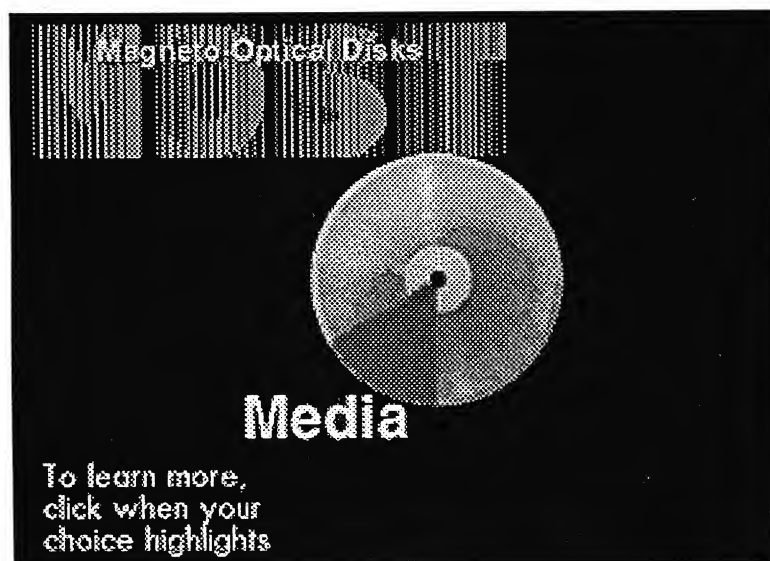
seven to be a critical number in people's perceptive abilities. For example, almost all people can look at six marbles in a container and know there are six without counting them. Once there are more than seven marbles, most people have to count them to correctly state how many there are (see George A. Miller, *Psychology of Communication,* first published 1967, Baltimore, Penguin Books).

Using MacroMind Director, we imported a scanned photo of the disk, placed it center screen, and made six "pie-slices" to overlay it. In the Score, we programmed a loop, so that each slice overlaid the disk in turn. Also, each slice had an accompanying topic caption. When set in motion, each slice overlay and its caption held a little under two seconds before the next one appeared; a complete cycle of the choices took about 10 seconds.

The viewer, encouraged by the simple and complete operating instructions: "Click when your choice highlights," would click the button (actually a locked-down mouse), and the programmed click-trap would check the current frame number of the loop. The frame number was tested and the program would then jump to the appropriate chosen sequence. If the viewer clicked again when a choice was running, they would be returned to the cycle of six choices immediately and be able to select another.

Also, we had the program triggering 16-bit (CD quality) sound files from the Audiomedia card to provide voice-over to each of the animation choices.

Here is some of the thinking and code we used to make this happen.

The slices of pie animate over six frames each, so the first 40 frames or so of the movie made up the loop of choices. This loop runs until the viewer presses the button, then, based on the current frame number at the time of the click, the movie jumps to the start of the appropriate topic animation.

A simple script in the very first frame makes a macro run every time the mouse is clicked:

```
set the mouseDownScript to
"testClickMacro"
```

Now, every time the mouse is clicked, the macro "testClickMacro" runs. In this macro we determine the current frame number and, therefore, the topic chosen. From that information we can move the viewer to the chosen location. The macro looks like this (comments are in italics):

--(when the mouse is clicked)
```
macro testClickMacro
set frameNum=the Frame
```
--(putting the current frame number into a variable called frameNum)
```
if frameNum > 50
```
--(then we're already running a user choice, so the user wishes to be returned to the choices)
```
then put random (40) into
frameNum
go to frameNum
```
--(we are returned to a random frame of the loop of choices)
```
stopsound
```

--(audiomedia playback stops)
```
    exit
```
--(the macro stops running)
```
    end if
    else
```
--(we must be at the loop of choices to get to here, so we have to determine which choice the viewer made)
```
    if frameNum > 35
    then go to "Technology" --("Technol-
```
ogy" is a frame label)
--(add any Audiomedia instructions here each time to trigger audio)
```
    exit
    end if
    if frameNum > 28
    then go to "Future"
    exit
    end if
```
--(etc., etc. until all the choices are covered)

We added more features to this program. If no one used it for a while, the program would time out and run a six-minute animation with digital audio that we had made for this client earlier in the year. Then it would return to the interactive movie after this animation had run. It's important to remember to turn off the mouseDownScript and any timeOut script states before leaving the interactive movie *(set the mouseDownScript to empty, set the timeOutScript to empty)*. Otherwise your other animations may be subject to strange behavior.

This was a relatively simple program in terms of interactivity (click once to go to a topic, click again to return to the choices), but the one-button-interface has potential for more complex applications, particularly in training and learning for the physically handicapped.

To make a one-button program successful, don't offer too many choices at any given time. A multitude of choices is not only confusing, it takes time for a choice to come around because you must hold each choice on the screen long enough for the viewer to see and select it.

An obvious improvement would be to have the program "learn" how quickly the user responds and speed up accordingly. If a user always selects very late, you might slow the program down.

Reaction to this one-button approach has been very positive. Only viewers who deliberately tried to confuse the system by clicking many times in quick succession were able to cause it to malfunction. (By testing how close the clicks come, we quickly worked up some code to iron out this problem.) The simple instruction, "Click when your choice highlights," was understood easily by everyone, and, by trapping for a mouse down rather than a mouse up, we were able to make the program respond the moment the button was pressed.

One interesting viewer comment was that the time-based nature of the interface made him consider each choice in turn, rather than immediately select the first one that caught their eye.

Most importantly, a one-button interface means greater ease of use for the viewer, which the whole field of multimedia needs if it is to gain the acceptance that we all believe it deserves.

We can't allow our imaginations to be bound by existing computer interfaces, no matter how well designed they may be. Reaching out to new audiences or looking for new ways to entice old ones, we must think as designers and communicators when we work on the interface—not like experienced computer users. There's more (or less?!) to interactive navigation than pull-down menus and mice.

Too many chefs

DESIGN   How to produce great creative work in a committee

by Doris Mitsch

*P*RESENTING AN IDEA TO A COMMITTEE *is like being bitten to death by ducks.*
     I don't know who told me that, but it seems to apply to many projects—especially interactive (muddy) media projects. It's a fact about groups: the more people you get involved in a project, the more different opinions you will get. There is no way around this. Sometimes it can be a good thing. Sometimes it is very bad. Ideas shrink and die slowly, consumed by blunt little bites. Differing opinions are pretty much inevitable every time you get a group of people together.

The S. Scheier Dreck Curve
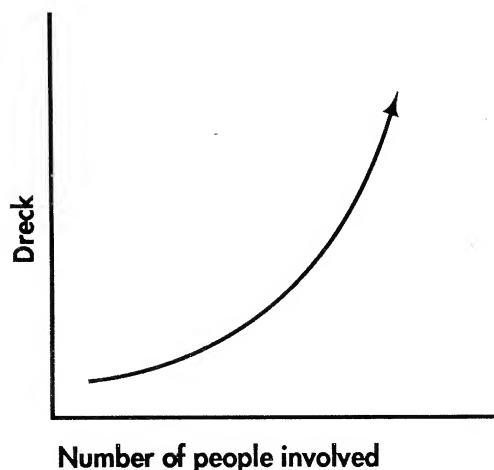
As the number of people involved increases, the amount of dreck produced increases exponentially.

We might as well accept this as a natural law of physics — but one that we can have some degree of control over. It can make all the difference to have more than one brain working on a problem. In fact, much of the best work is created by teams: the right combination of people working together to create something better than any of the individuals involved could have created alone. Even large groups can be productive — if the process is managed well. The trick is that the process needs a certain kind of structure.

You can't design a thing until you know what it is

I took a course recently in which I expected to learn something about the "creative process," whatever that means. As it happened, the course coincided with a project that I was working on that involved not only many decisions by committee, but also some design by committee. In this case, it wasn't working, and I was having trouble figuring out what to do about it. I was expecting the course to have something to do with brainstorming, which we had been trying to do.

Brainstorming is a process in which people sit around, drink coffee or beer, and spit out whatever ideas come to them. (Some people think that there can be no ideas without thoughts, but that would be another article.) Anyway, the class turned out to be one of those "You can do it!" kinds of courses: guidance for confused people who want to learn to take charge, make decisions, and achieve their goals. I stuck around anyway, realizing that in many ways a committee can be likened to a large, confused person.

One rule that was mentioned in the course especially interested me. I've expanded it to two: (1) You have to know what you want before you can figure out how to get it, and (2) you have to figure what you're doing before you start. None of this is news, but the important part is that that's really all there is to it. Once you understand these two rules, and learn to apply them to whatever you're doing, the rest is a lot easier, whether it's making a sandwich or writing a film. In the class, they had us practice this by writing down goals, making lists, and drawing little diagrams to structure our "process of creating." It reminded me of something.

I spent some time recently with Hugh Dubberly, drawing little diagrams. Hugh heads the computer department at Art Center College of Design in Pasadena. We were trying to draw a diagram of the creative process. (Hugh seems to think that if you can't draw a diagram of something, it doesn't exist.) Before that, we had been using a loose definition of the creative process:

(1) Somebody wants something and (2)You make something up. We were sure there had to be a better way to describe our business. We came up with soemthing that looks a little like an argyle:

_____ Define

_____ Speculate

_____ Define

_____ Speculate

_____ Define
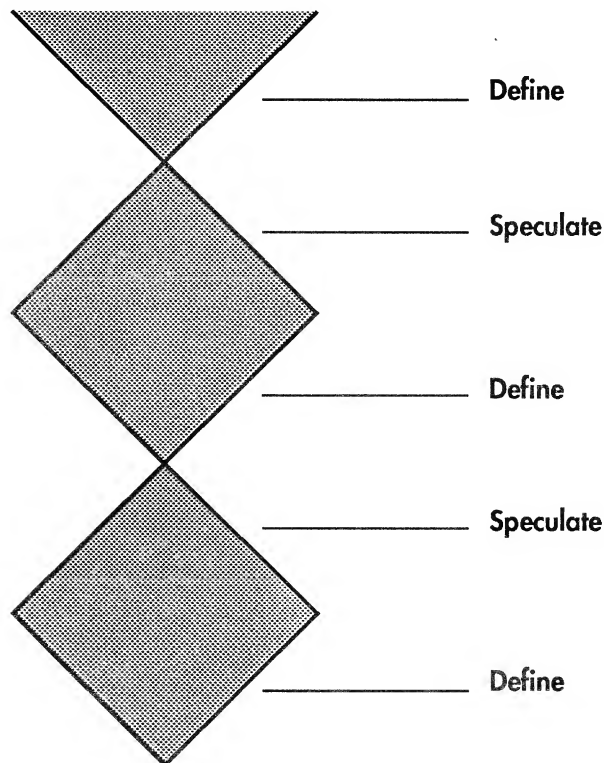
The design process is a series of steps that narrow down or open up a range of choices.

The only way a committee can produce work as a group is by having a full understanding of the problem and evaluating options based on its requirements. To design something is to make a series of choices. What you end with, whether it's a video, a HyperCard stack or a book, is defined by the choices you make. The process alternates between narrowing down and opening up a range of choices.

Define

First you have to define the problem you're trying to solve — the result you want to create. If you're producing work for someone else, you need to identify

the requestor. Identify the purpose of the project — for the individual requesting it, and for the person's organization. What result do they want from it? Identify the audience: Is it limited to a certain type of person or group of people? What do they care about? Why should they be interested in your project? Will it be used — or perceived — in different ways by different people? Defining your objectives begins with plenty of conversation about your purpose, followed by much testing of the results.

People in groups tend to start start popping up with ideas at this point: "I know what we could do..." It's important not to discuss solutions at this point. Keep the conversation focused on the purpose, and be specific.

Reduce the problem to one sentence. Write it down. Reach consensus. If the group doesn't agree on the problem, then every discussion will involve a conflict of some kind. Don't underestimate the difficulty of this. The more people involved in a project, the more complicated the process of defining the problem. But once you've done it, it will help structure the rest of the process. Inevitably, as the project progresses, people will have different ideas about what should be done. This can be frustrating if you find yourself trying to make one project be "all things to all people." If you try to accommodate every suggestion, you risk ending up with a "fruit salad" solution that has many elements in it, but tastes like nothing identifiable. If you can get everyone to agree on the purpose at the very beginning, you can evaluate the suggestions that come up against the purpose that was decided at the beginning. This also helps prevent disappointment when an individual's idea is discarded by the rest of the group.

Once you've defined the problem, you need to define the purpose of the approach you're going to use to solve it — without yet defining what that approach will be. Define your objectives as clearly as possible. Don't stop with "We want it to be engaging" or "The client likes bright colors." What's the major point you want to make — or information you want to convey? What are the secondary points? Is there evidence or are there examples that support those points? Does the message need to be delivered in an interactive form? Would it be better to create something else instead?

Unless your group is homogeneous to an almost creepy degree, each person will have a slightly different idea of what is important. Sometimes they will have vastly different ideas of what is important. Often, people are invited to be part of a group precisely because they have a viewpoint that's different from

everyone else's. Expect this. Base your objectives on the purpose that everyone agreed upon at the beginning.

Speculate

Once you've boiled the problem down to its simplest form, then you broaden your choices again. Now you can speculate about what the approach, or treatment, will be. What opportunities are there? What resources are there? Is there an obvious way to tackle the problem? Then what are the less obvious ones? Once you've hit on an idea everyone likes, write it down, put it away, and think of three better ideas.

Though it's important to do this even when you're working on a problem alone, this is a part of the process where it really helps to have many people involved. It's tough for one person to come up with three equally exciting ideas. If you can get a few other people in the room, you may find you have ten times as many good ideas. Again, you can use the problem and the criteria you agreed upon to narrow them down to a range of options that all seem equally good — and apply equally well to the problem you're trying to solve.

Define

Once you've speculated about the various options you have, narrow down again and get to the point. Find the big idea — or organizing principle — or metaphor. The film business calls this part the concept. For a training program, the concept might be "Using this new software is easy because it's a lot like something familiar: using a pencil." For a movie, the concept might be "In the future, machines will be dangerous because they'll be so much like people that it will be hard to tell the difference."

Speculate

Once you have the big idea, speculate again about its structure. What are the parts, ideas, information, features and functions? If it's a software program, what are its features? What are the sub-plots in the movie? What are the sections in the HyperCard stack? If it's a book, what are the chapters? If it's a training course, what information needs to be taught and what are the activities that teach it? This is where the process

becomes recursive. You can apply the structured approach you used for the large task of creating to any of the mini-tasks involved in it. Apply the process to every part of the problem. Once you have a thorough understanding of what you're trying to do, and why, you can figure out how.

And so on

This process involves many smaller processes that most people are already using. In many ways, it's just common sense. In some ways, it might seem like it's a more tedious and time-consuming way of doing some ordinary tasks. But the tedious and time-consuming part about working with a group or committee usually comes later in the process, as people make decisions that don't support what others are doing or when individuals' tastes and preferences conflict. For every choice that an individual makes, there's another person who will choose the opposite. And it's inevitable that people will change their minds. Usually someone, somewhere along the way, will go completely non-linear and insist on an approach that doesn't have anything to do with the objectives the group has set up. If you have a structure to follow, you can stop this kind of runaway train without causing disappointment.

The biggest risk in working as a group is compromising until you end up with a bland solution that's offensive to no one, but inspires no one either. This happens when you try to marry many contradictory approaches. You finish a fruit salad that tastes like nothing. If you can structure the process so that everyone agrees on a few basic principles, then there will be no need to compromise. Everyone can have input, and ideas will be evaluated against criteria that everyone upholds. No one gets hurt, and everyone produces work to be proud of.

Doris Mitsch is an art director and producer at Clement Mok Designs, a multi-discipline design firm in San Francisco. She has written and designed communications materials in a variety of media, including Apple's 1987 video, The Knowledge Navigator.

Protecting your work

LEGAL   Legal remedies when copyrights are infringed

by Stephen Ian Macintosh

VIOLATING A COPYRIGHT carries stiff penalties. Because of the amount and variety of component media often used in multimedia computer programs, and because of the presently thin market for such programs, it's more likely that the multimedia developer will be accused of infringing the copyright or other intellectual property rights of a third party rather than the other way around. Infringement is an extremely complex, high-stakes area. It is not a legal "Do-it-yourself" subject. If you become involved in an infringement dispute, consult with an attorney experienced in the field. The following sections are provided to give an overview of the process and details of the initial defensive steps.

Cease-and-desist requests

The first step, once infringement has been discovered, is for the aggrieved party to send a letter (usually on the stationery of an attorney) to the infringer notifying him that he is violating the copyright of the aggrieved party. See the sample cease-and-desist letter on on page 11. If the infringement is arguable, e.g., protected by fair use or insubstantial, this should be pointed out in a prompt reply. It's almost always a good idea to reply to a cease-and-desist letter, given the costs of defending a lawsuit that may follow an unanswered request.

The most obvious target of a cease-and-desist request is outright piracy. But even the use of a copyrighted work in an internal corporate training program is an infringement risk. Interactive sales presentations containing unauthorized copyrighted elements are very risky and sales of multimedia computer programs incorporating pirated material are almost sure to draw litigation.

From the point of view of the victim of infringement, it's important to act quickly. If you delay in demanding that an infringer cease and desist once the infringement has been discovered, you may prejudice your case and give the infringer certain equitable defenses. Some victims of infringement have successfully pursued the strategy of waiting until the infringer's profits have grown large enough to warrant a suit (sometimes known as giving the infringer enough rope to hang himself), but this strategy is risky from the victim's point of view.

When you have discovered infringement, find an attorney to pursue your claim. If the infringement is clear enough, you may be able to find a lawyer who will take the case on a contingency basis, especially since successful copyright plaintiffs are entitled to an award of attorneys' fees.

Preliminary injunctions

The main reason to act quickly upon the discovery of infringement (and the chief worry of the recipient of a cease-and-desist letter) is the availability of a preliminary injunction. A preliminary injunction is a form of equitable remedy granted by a court to prevent irreparable harm from befalling the plaintiff prior to the end of the trial. A preliminary injunction is a court order that prevents a defendant from doing something (or not doing something) before it has been established whether the defendant has a right to engage in the enjoined activity.

An interactive video producer, for example, could be enjoined from demonstrating the program to a potential audience or a corporation could be prevented from training its employees with an infringing program, if the plaintiff was successful in obtaining a preliminary injunction against use of the infringing work.

A preliminary injunction is an unusual remedy in most areas of law. Courts usually limit the plaintiff to damages for any wrong he may prove. However, in the context of copyright infringement suits (as well as in trademark infringement suits), preliminary injunctions are the norm. If the plaintiff can produce a certificate of copyright registration and demonstrate that the defendant has violated any of the rights of a copyright owner, the plaintiff will be entitled to a preliminary injunction. The defendant will then have to prove later at trial that the use was fair, permitted or otherwise non-infringing. By the time the case goes to trial, however, the defendant may be out of business or may have incurred significant losses through delay.

Because a preliminary injunction is available to a plaintiff soon after infringement is discovered, and because the granting of the injunction greatly strengthens a plaintiff's case and his negotiating position, the grant or denial of such relief often effectively ends litigation.

A motion for a preliminary injunction — the plaintiff's assertions of an urgent need for immediate relief — will be discounted by the court if the plaintiff has not been diligent in pursuing his claim through cease-and-desist letters and a timely filing of a lawsuit once infringement has been discovered.

Survival Tip

Risks of Infringement

Any unpermitted "commercial" use of a copyrighted work runs the risk of a lawsuit. Most copyright owners who discover infringing use will issue a demand that the infringer stop, before they actually file suit. If you have made any sales of an infringing work, the copyright owner will have a right to some or all of your proceeds.

In fact, a copyright owner isn't obliged to ask you to stop infringing before he or she sues you. Indeed, even if you only were using their work in a demonstration and have not directly made money from the use of their copyrighted work, they may be entitled to damages up to $100,000.

There are many ways to violate a copyright. Use of a copyrighted work for internal purposes within a company may violate the owner's copyright. Use of a work in a demonstration at a trade show may constitute a violation. The risks of any potential copyright violation must be weighed against the likelihood that the infringement will be discovered (or objected to) and the ethical obligations of one creative professional to respect the rights of other artists and authors. One thing is certain — as the multimedia industry grows, copyright owners everywhere will increase the intensity of their examination of multimedia works, looking for potential infringement.

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no money from the infringement, or the plaintiff's sales or reputation were not diminished, the defendant may still be held accountable for a potentially large damage award for the infringement of a copyright.

The range of statutory damages is $500 to $20,000 for each work infringed for unintentional or negligent infringement. In the case of willful infringement — copyright piracy — the ceiling of statutory damages is increased to $100,000 for each work infringed.

As if the ready availability of injunctive relief and a variety of damages were not enough, successful plaintiffs in copyright infringement cases are entitled to

Damages

If a case of infringement goes to trial, the plaintiff may be entitled to various types of damages. These include:
- actual damages;
- the defendant's profits;
- statutory damages;
- attorneys' fees.

Actual damages, such as lost sales or diminished goodwill, are available in copyright cases as in all civil law suits. A plaintiff may additionally or alternatively be entitled to recover that share of the infringer's profits attributable to use of the infringed work.

Section 504(c) of the Copyright Act provides for a special type of damages called "statutory damages," which may be awarded for infringement occurring after copyright registration. Statutory damages are awarded in lieu of (or in the absence of) proof of any actual damages or profits. Thus, even if the defendant made

reasonable attorneys' fees incurred in prosecuting the copyright claim. As with statutory damages, however, attorneys' fees are generally available only for infringements post-dating copyright registration. In unusual circumstances, successful defendants may also be entitled to attorneys' fees expended in defense of a meritless claim. The provision in the copyright law for the award of attorneys' fees, however, is definitely pro-plaintiff — successful plaintiffs recover attorneys' fees far more often than do successful defendants.

Stephen Ian McIntosh is a California lawyer and author of the Multimedia Producer's Legal Survival Guide, published by Multimedia Computing Corp., from which this column is excerpted. Until recently, McIntosh was associated with the law firm of Pillsbury, Madison and Sutro. He is vice president of finance and administration of Earth Wise Inc.

Sample cease-and-desist letter

VIA REGISTERED MAIL
RETURN RECEIPT REQUESTED
Mr. Joseph Infringer
[address]

Dear Mr. Infringer:

This law firm represents [client], publisher of *X Magazine* and copyright owner of a photograph [identified] that appeared in *X Magazine* on Sunday, February 25, 1990.

It has come to our client's attention that its copyrighted photograph has appeared in a poster published by Joe Infringer, Inc. which is being distributed at least throughout the Bay Area. Our client informs us that it has contacted you on two occasions to ask you to stop distributing the poster incorporating this photograph. To date, you have not returned calls to our client nor informed them of the steps you intend to take to stop distribution of the photograph. To the contrary, it appears that you have willfully continued to distribute the photograph after having been advised of our client's copyright interest in it.

Your unauthorized use and reprinting of our client's photograph on your poster constitutes an infringement of our client's copyright. This publication and distribution does not qualify as a fair use under section 107 of the United States Copyright Act, 17 U.S.C. US 101, et seq. Our client considers this to be a very serious matter and has authorized us to undertake legal action on its behalf to prevent you from further publication and/or distribution of posters infringing its copyright in the photograph.

In the event a court finds your use infringing, some or all of the following remedies would be available under law: (i) injunction against further publication and distribution, (ii) seizure of all infringing posters (which may be impounded by the court and destroyed), (iii) actual damages that are attributable to the infringement or, alternatively, statutory damages, up to $100,000 if the infringement is found to be willful and (iv) recovery of legal costs and attorneys fees.

We hereby demand that you cease and desist publishing and distributing the poster incorporating our client's photograph. We ask that either you or your attorney contact us immediately in order to discuss what actions you will undertake to satisfy this demand. If we have not heard from you within two weeks from the date of this letter, we will have no choice but to commence legal proceedings against you.

Sincerely,

Stephen Ian McIntosh

cc: [client]

NewTek Video Toaster

PRODUCTS   Todd Rungren's first impressions

by Nick Arnett

THE EXCITEMENT ABOUT NewTek's Video Toaster add-in board for the Commodore Amiga led us to search for someone who's had a chance to work with it for a while, to find out just how good this $1,595 "video production facility in a box" really is. We found an interesting one.

Todd Rundgren, who's better known for his long, successful career as a rock-and-roll musician than for his programming and video production talents, has been working with the Video Toaster for several months. Rundgren is producing a 4-minute animated music video for one of the cuts on his next album, "Second Wind," which is due at the end of this month.

Rundgren's comments shouldn't be interpreted as a formal review of the Toaster — we're working on a complete evaluation for the next issue of *Mind over Media*. This is a first impression. It's important to note that Rundgren was working with software that wasn't final. The 1.0 versions of the applications shipped on Nov. 12th, just after we spoke with Rundgren.

Rundgren hasn't just been working with one Toaster, he has "a small army of machines" to speed up rendering of 3D images, the critical component of the music video he's working on.

"It allows me to see a 24-bit, video-resolution image of what I'm creating," Rundgren says. "At the very bottom level, it's a really cheap 24-bit video frame grabber, with what would be thousands of dollars worth of software on another system."

A former video producer, Rundgren says he's impressed with how much the Toaster offers for the low price.

"When I got involved with video, the hardware necessary to do this was much more expensive," he says. "If I wanted to buy a switcher, the cheapest one was $5,000, with no effects—maybe the most rudimentary kinds of wipes. And to make use of it, you had to have all this other video equipment. The great thing about the Toaster is that you can plug your camera into it, capture images and do great things with it."

However, he notes that the Toaster isn't able to synchronize to marginal video signals, such as those produced by many consumer VCRs, which will need a time-base corrector to stabilize the signal.

All is not perfect on the software side, Rundgren adds. As long as you stay within the Toaster software, which includes 3D rendering, 3D animation, 3D object modeling and video painting, the user interface and quality of the software are consistent and good. But once you step outside of the Toaster software to use other Amiga software, nothing is consistent or well integrated, he says.

"The general level of programming discipline and user guidelines is so awful in terms of Amiga software that I'd really prefer to stay within the Toaster environment," Rundgren says. One problem is simply that applications don't tolerate errors well, he says. "The graceful way they inform you is by crashing," he explains. "I suppose that's why Amiga software is so cheap. I'd rather pay more for software that's more robust."

The Toaster software doesn't include everything he wants. "Ideally, I'd like to use a modeler that uses splines and surfaces, rather than simply polygons," he says. "There is such a modeler for the Amiga, but it's poorly supported and has an awful user interface."

Rundgren, who has written graphics and other software for the Macintosh and other computers, is planning to write Toaster software himself, when Newtek makes the specs for the hardware available, which he expects sometime soon.

The NewTek Video Toaster requires a Commodore Amiga 2000 or 2500. Three megabytes of RAM are recommended. A hard drive is required for still store features. Key features:
- Digital video effects.
- Character generator.
- Color processing.
- Dual frame buffers.
- Production switcher
- Output preview.
- Linear keyer.
- Digital still store.
- Frame grabber.
- Software: 3D rendering, 3D animation, 3D object modeling, paint.

NewTek Inc., 115 W. Crane, Topeka, KS 66603; (800) 843-8934; (913) 354-1146; fax 354-1584.

Hypertext for online documentation

HYPERTEXT   Dr. Glushko's HyperHelp for small and large information collections

by Robert J. Glushko

ONLINE HELP AND ONLINE DOCUMENTATION have much in common, but they can be contrasted on several dimensions. Help is often system-initiated and intended to help users recover from errors or solve specific problems in a particular application, often by reminding them of what they already know. Documentation is user-requested and, at least in principle, supports broader learning or planning activities.

Help is more context-sensitive than documentation, which makes units of help information smaller than documentation topics. Finally, since help information is designed explicitly for online display, it is less likely to be assembled in a printed form as part of the delivered system or application.

Online help has taken many forms since the first well-intentioned programmer included semi-meaningful error messages. But online help embedded in the application is frozen, can require many separate help messages and is often left to the programmer, who may not be the best person to decide what to say or how to say it. Worse, when online help is designed separately for each application, it is likely to be inconsistent in conceptual design or user interface.

A separate help system with a carefully designed organization and user interface solves some of the problems but creates others. If the user has to exit or suspend an application or otherwise assume a more general context to get help, much of the benefit can be lost, no matter how easy the help system. The sharper the boundary between the application environment and the help facility, the harder it is for the help system to provide appropriate information.

Hypertext provides context sensitivity

Hypertext offers both the fine granularity and context-sensitivity possible with embedded help and the ease of development, maintenance and use of a separate help system. Users might want online help on any action or output of an application. (They might even need help understanding its error messages or dialog boxes!) System developers will never be able to identify in advance all of the possible contexts and help information. Thus, the goal of a hypertext help facility

is to suggest or let users jump to appropriate help information from anywhere in any application, let them browse or search in a help network and then allow them to return to the place they started. Some of these hypertext help features require advances in inter-application communications.
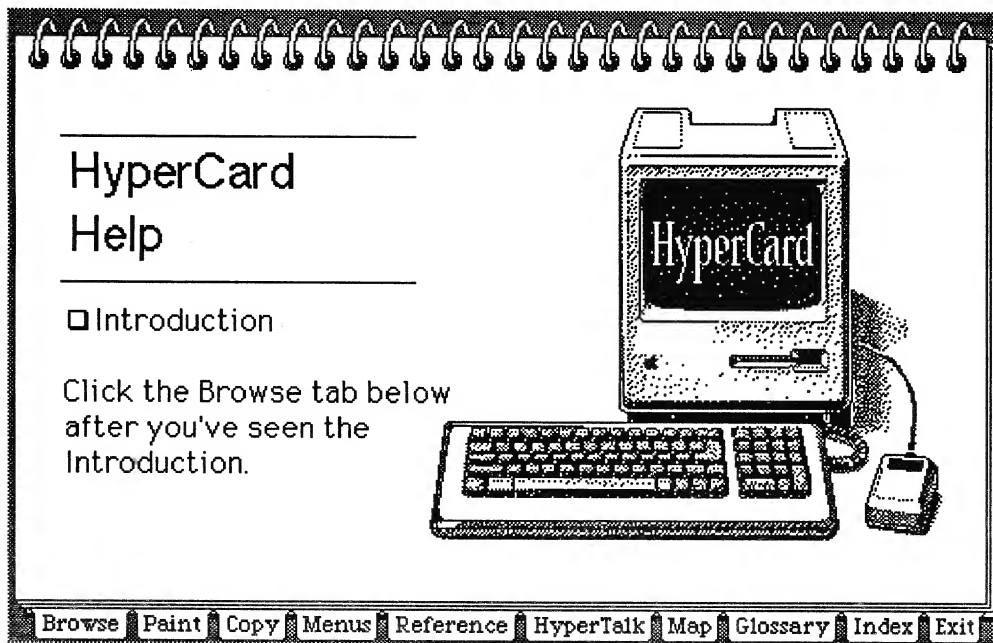
Hypertext help information may eventually be available in a much wider range of media, including spoken or videotaped application hints. Users will be able to specify how much detail they require, ranging from concise reminders to step-by-step tutorials. This tailoring of detail will not be accomplished by selecting expert or novice modes in the help system, but choices in each help unit as it is viewed.

Future hypertext help facilities will no longer be static. Users will be able to leave text or voice notes on help information. The system will retrieve and display problem-solving "trails" and annotations made by users on prior visits. Users will be able to create their own links from any events or objects in an application to the help system, linked to existing help information or to information the users insert.

HyperCard help

The popular HyperCard program on Apple Macintosh computers contains its own help system that illustrates the use of a familiar metaphor to enhance the usability of online information while hiding irrelevant detail (Apple Computer, 1987). HyperCard has a "flip chart" that appears when users select help (see next page). Users view parts of the help manual by selecting the tabbed divider buttons at the bottom of the cards. Since users see details only in the locations they select, few realize that the help system contains more than 400 cards. Although this is still a small amount of information, the flip chart metaphor should work for a much larger volume. The tabs are a graphic analog of a textual table of contents.

HyperCard help uses a secondary metaphor of a map that represents the logical structure of the help manual (next page). When users select an icon representing a specific stack of cards in the help manual, it is as if they "zoom" through space to view the set of

HyperCard Help

☐ Introduction

Click the Browse tab below after you've seen the Introduction.

HyperCard

| Browse | Paint | Copy | Menus | Reference | HyperTalk | Map | Glossary | Index | Exit |

cards in that part of the manual. Since the tab dividers already let users choose any of the major sections, the map is largely redundant, but the two ways of finding information might appeal to different users.

Sun 386i help viewer

The Sun 386i workstation contains a hypertext help system called the Help Viewer (Campagnoni & Ehrlich, 1989). Information about the 386i and important applications such as mail and text editing is arranged in eight handbooks, each of which contains a set of topics. Topics are the basic units of the help system and are typically a few pages long. Like HyperCard cards, the pages are often a mixture of text and graphics. In all, the 386i Help Viewer contains 342 pages.

Users can invoke the help system from any application for "spot help" or explore systematically from the table of contents, which includes a listing of the eight handbooks and an index. Likewise, each handbook is highly structured. Each handbook contains a table of contents listing the topics, a "basics" topic, a set of procedural topics explaining how to carry out the most important tasks for the application, and an index.

The Help Viewer has two kinds of hypertext links. The first are links between items in the tables of contents or indexes to the topics to which they refer. Links between topics are indicated by underlined words or phrases.

The basic help system can be extended via "hand crafting" by users and administrators, including launching and controlling applications or shell scripts. This latter feature may allow voice or video help to be added.

Dictionaries and encyclopedias

General-purpose reference books such as dictionaries and encyclopedias seem like natural candidates for hypertext because their basic structure seems inherently well-suited. At first glance, dictionary definitions and encyclopedia articles can be viewed simply as stand-alone information units enhanced by cross references, making a transformation to hypertext straightforward. However, a closer look shows that they have richer and more complex structures.

Dictionaries are far more complex than simple alphabetical lists of words with definitions. The entry for a word might contain pronunciations, etymology, quotations, synonyms, usage notes, and illustrations. Words with several senses might include some or all of this information for each distinct sense. While the intrinsic organization of dictionaries is obviously alphabetical, many dictionaries also contain several additional alphabetical lists. For example, the *Webster's Ninth New Collegiate Dictionary* includes lists of abbreviations, foreign words and phrases, biographical names, geographical names, colleges and universities, and common signs and symbols from a variety of disciplines.

Likewise, although encyclopedias vary greatly in format or content, almost all of them represent a significant intellectual achievement in consolidating, organizing, and presenting some body of knowledge. A printed encyclopedia typically has:

• Thousands, or perhaps even tens of thousands of articles, typically collected in multiple volumes and arranged in alphabetical order by title. Longer articles may have several levels of headings and sub-headings and may even have their own "table of contents."

• Hundreds or thousands of pictures, diagrams, graphs, maps, and other non-textual components, usually but not always associated with particular articles.

• Cross references from each entry to related articles, sections of articles, or to non-textual components.

- A comprehensive hierarchical index that points to articles or sections of articles. Index terms include article titles and section headings and other important concepts and names that are mentioned in articles.
- Additional indexes (e.g., indexes to illustrations or authors), tables of contents, alternative classification schemes for the articles (e.g., timelines, scientific or other taxonomy), or similar supporting material such as a glossary.

It is somewhat paradoxical, but the comprehensiveness of multiple-volume reference books often keep users from exploiting their carefully designed structure. In principle, following cross references is a simple task. We can all visualize using a bookmark or a thumb to hold our place in a book while we turn elsewhere. In practice, however, following more than a few cross references can require too much juggling of bulky texts. Some encyclopedias arrange brief treatments of subjects in separate volumes from comprehensive articles.

A complete transformation of the rich structure of dictionaries and encyclopedias to hypertext would overcome these limitations and radically improve their usefulness. Unfortunately, the first electronic reference books made relatively little use of their structure. Encyclopedias were put on-line as indexed text databases with full-text search as the only way to find articles. This approach derives from the assumption that the computer typesetting files ought to be reused in the most efficient way. It has similar consequences as the attitude that online documentation for computer systems comes along for free when print documents are produced with word processing.

Although this approach gives some benefits to those who understand the limits of full-text indexing and retrieval, when mechanically applied it leads to some absurdities. For instance, the CD-ROM version of the *Kirk-Othmer Encyclopedia of Chemical Technology* indexed the table of contents and index along with the text of the articles, which undermines the logical and hierarchical structure of the encyclopedia. The Kirk-Othmer CD-ROM also reduced the extensive tables of chemical data to the same fate of homogenization via automatic indexing, so that it is possible (though useless!) to find that the word "2" occurs in various tables and as page numbers in reference citations.
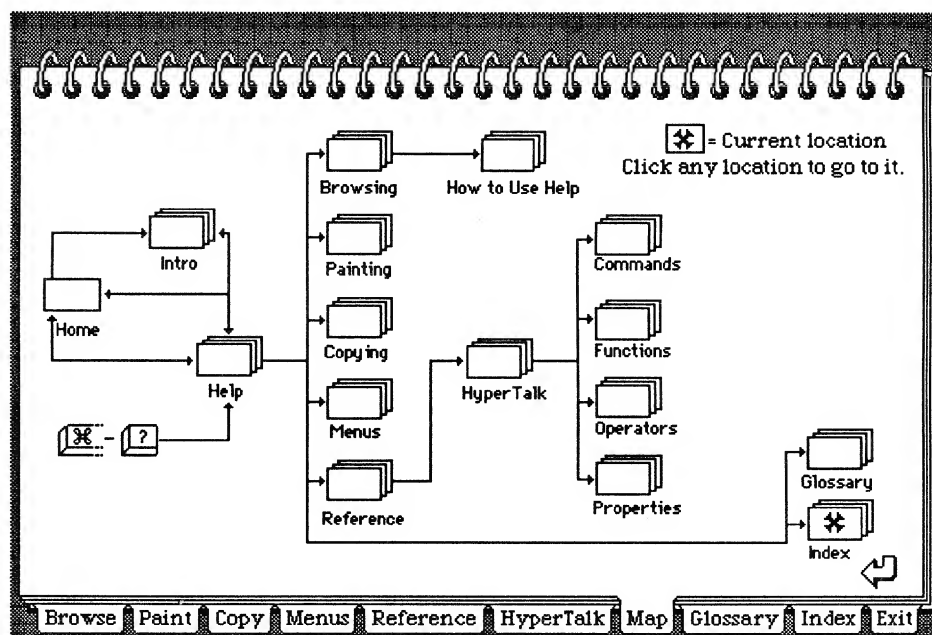
Other text-only encyclopedias preserve more of the structure of the print version. *Grolier's Electronic Encyclopedia,* a CD-ROM version of the text from the *Academic American Encyclopedia,* is a leading example. Long articles have their own tables of contents from which users can jump into particular sections. Grolier has recently announced an updated version of the *Electronic Encyclopedia for the Macintosh* that will include more hypertext features, illustrations, and other improvements over the text-only edition.

The original *Grolier Electronic Encyclopedia* shows that electronic reference books can be useful even without the non-text information from the printed version, but this is not always the case. It clearly depends on the relationship between the text and non-text information in the print version. An art or medical encyclopedia, for example, would have little value if none of the illustrations could be viewed in the electronic version. As graphics capabilities of computerized publishing systems continue to improve, more of the non-text content of reference books will be created on computers, which in turn will make it easier to use non-text information in hypertext versions.

Oxford English Dictionary

Many of the challenges in creating hypertext versions of large reference books have arisen in an ongoing project involving the *Oxford English Dictionary* (OED). The OED, published by the Oxford University Press, is by far the largest and most scholarly dictionary of the

English language. The OED is distinguished from other dictionaries by the extensive quotations it uses to explain the senses and history of a word's usage. The first edition took nearly 60 years to compile, and was first published as a complete edition in 1933 in a 12-volume collection that contained 252,000 entries and 1.8 million quotations. A four-volume Supplement, produced from 1972-1986, added another 69,000 words and approximately 600,000 quotations.

Casual users of the OED might think of it as merely an exceptional dictionary, but for decades it has been used as a research subject and aid by scholars and writers in many humanities and social science disciplines. Example research questions might be "How many words of Dutch origin are in common English usage?" or "How was the word 'machine' used before the Industrial Revolution?" With the printed OED and Supplement, answering such questions required tedious hand searches through multiple volumes, and the range of possible questions was artificially limited. Transforming the OED and Supplement into a text database will facilitate language research and significantly ease the ongoing revision of the dictionary.

In 1984 Oxford University Press set out to merge the original OED and Supplement into a second edition. Since the OED was created long before computerized typesetting, there was no computer-readable form. After testing other methods, it was decided that the most efficient and cost-effective method for this job was to have typists manually rekey the entire 21,000 densely printed pages. As the typists worked, they inserted "markup codes" or "tags" to identify 20 parts of each entry, including the headword, definitions, etymology, and quotations. Each quotation was further subdivided by tags for the date, author, source, and quotation text.

The tagged text from the original 12-volume OED was the basis of a CD-ROM published in 1988. Its user interface, which does not contain hypertext features, is a traditional full-text Boolean search system based on indexes created from the eight primary tags.

The 20-volume printed second edition was published in 1989. An electronic version of the second edition with a state-of-the-art user interface will be commercially available in the early 1990s. The research and development involved in creating tools for editing, storing, and searching the electronic "OED2" is being conducted by the Centre for New Oxford English Dictionary at the University of Waterloo in Canada. In particular, the Centre is investigating the possible role of hypertext to enhance the usability of the electronic OED2 (Raymond & Tompa, 1988).

The general lesson so far is that simple notions of hypertext will not work for richly-structured text databases of massive scale. Two problems stand out. The first is that because dictionary entries are not uniform in structure and vary in size from a few words to tens of thousands, it is impossible to specify a static definition of hypertext components as entries or composites of parts of entries. Instead, it is necessary to let users employ multiple views of an entry, where each view is optimized for a different purpose and dynamically generated by retrieving and displaying only particular tagged elements within an entry.

The second hurdle for hypertext in the OED2 results from the approximately 580,000 explicit cross references identified by tags in the text database. These cross references point to variant spellings of a word, synonyms, or inflected forms with prefixes and suffixes. The sheer number and variety of cross references pose obvious problems. In addition, many of the cross references are not precisely specified. Taken together, these factors argue against hypertext links by explicitly storing a pointer to the cross reference destination. Instead, the referred-to entry is retrieved by looking it up in an index that points to the beginning of each entry in the database. The custom indexing and retrieval software needed for a text database the size of the electronic OED2 handles the job easily.

Robert Glushko, Ph.D., is a principal scientist at Search Technology Inc. He has been a consultant to publishers, computer makers, software developers, accounting firms, telephone companies, the Dept. of Defense and others engaged in hypertext applications. This is the third in a series taken from his book, *Hypertext Engineering,* which will be published early this year by Digital Press.

The List
Macintosh video frame grabbers

These products allow you to display motion video on a Macintosh computer screen along with computer graphics.

- **Aapps Corp.**, 756 N. Pastoria Ave., Sunnyvale, CA 94081
  (408) 735-8550; fax (408) 735-8670
  DigiVideo Color ($995) — Real-time digitizer with a built-in television tuner on a single card. Displays video in two sizes, 1.5-by-1.8 inches or 3-by-3.6 inches. Includes software for image capture in 24-bit color or 128-level gray scale. Aapps also sells lower-cost, black-and-white digitizing cards. A HyperCard 2.0 stack supports color and gray scale capture into stacks.

- **Intelligent Resources**, 1626 Colonial Parkway, Inverness, IL 60067-4732
  (708) 705-9388
  Video Explorer (under $10,000) — Still and live video capture with digital special effects including anti-aliased titling and computer-generated graphics on live 24-bit video.

- **Mass Microsystems, 810 W. Maude Ave.**, Sunnyvale, CA 94086
  (408) 522-1200; fax (408) 733-5499
  ColorSpace II ($1,895 and up) — Graphics overlay, other special effects. Models are available for Mac IIs and Mac Plus/SE.

- **Radius Inc.**, 1710 Fortune Drive, San Jose, CA 95131
  (408) 434-1010
  RadiusTV ($2,995) — Digitized video in 16-bit color in real time at full-screen size (640-by-480). Also digitizes audio. Includes a NuBus card and external box with television tuner and closed-captioning decoder. Comes with a software development toolkit with modules that can be invoked from C, Pascal, HyperCard and other languages or environments.

- **RasterOps Corp.**, 2500 Walsh Ave., Santa Clara, CA 95051
  (408) 562-4200
  Video ColorBoard 364 ($1,295) — A single-slot board that displays full-motion 24-bit video on an Apple 13-inch or compatible monitor. It is also a 24-bit computer display board. Video images can be saved in PICT or TIFF format. XCMD and X-Object software is available for HyperCard, SuperCard and MacroMind Director.

- **Truevision Inc.**, 7340 Shadeland Station, Indianapolis, IN 46256-3925
  (317) 841-0332; fax (317) 576-7700
  NuVista+ ($2,995) — Real-time video digitizing with digital linear keyer and chroma keyer, which allow portions of the video signal to be overlaid with graphics, including 256 levels of transparency. Includes advanced genlock to allow the card to synchronize to a wide variety of video equipment, including inexpensive VCRs.

- **Videlogic Inc.**, 245 First St., Cambridge, MA 02142
  (617) 494-0530; fax (617) 494-0534
  DVA-4000/Macintosh ($2,995) — Real-time digitizer comes with MIC System II software, with the same software interface as Videologic supports on its IBM and compatible video cards, as well as a HyperCard MIC video toolkit.

- **Workstation Technologies Inc.**, 18004 Sky Park Circle, Irvine, CA 92714
  (714) 250-8983
  Moonraker (OEM) — Digitizes at up to 30 frames per second, with display at up to 16-bit, transmitting the video over NuBus for display in a window or storage on a hard disk. Video can be saved in PICT2 or PICS format. Compatible with Apple display cards. Supports HyperCard, SuperCard, MacroMind Director, AuthorWare, PhotoShop and others. Each board is capable of two simultaneously live inputs. Multiple boards can be used together.

MIND over MARKETING
...And who do you think you are?

by Dan Ryder

The late comedian Sam Levenson said that his father should have been credited with inventing psychiatry. Arriving home shortly after the news of some of his adolescent foolishness, young Sam would be greeted by his father, who would ask with inflections of anger, disapproval and disdain: "And who do you think *you* are?" he bellowed.

If that wasn't the invention of psychiatry, it certainly is a central question in analysis. It also should be the central question at the beginning of marketing analysis. You should ask the question, "Who are we and how are we perceived by our market?" That applies if you're running a communications department in a large corporation or an independent company. Unlike Sam's case, this is not a question that demands silence, but one that requires analysis and exposition by all the people who sell in your organization. And that's frequently everybody you work with.

Frankly, we've had to discipline ourselves to start at the beginning with each client. *Assuming* that the client has thoroughly thought out his position(s) has led us astray a few times. Even if the client has thought it out, it is still a good place for a consultant to start.

The concept of positioning is very simple. It's how you're perceived by your customers and your prospects. Marketing is all the things you do — everything you manipulate in the marketing mix from product, advertising, price, guarantees, packaging, direct sales etc.—to shape the market's perception. Every marketing text advises you to write out a position statement, picking and defining your niche carefully. Most recommend examining the basic who, what, when, where, why and how questions.

Start with the things you know best. Ask: What does my department or company do? What is our product? How do our clients benefit from using it?

Ignorance reigns

Most marketing texts deal with niche marketing in established marketplaces, the supermarket, car dealers, office equipment, for instance. Everyone knows what detergent is, what a car is, what a copier does. How many of your clients understand what multimedia is?

How often do you have to start a discussion of your product with a definition of multimedia? What business (or businesses) are you *really* in? Which sectors do you serve?

Our real competitor is frequently ignorance, our toughest sales job is often education.

Most of our clients are communicators, who are most frequently trying to sell to other communicators, educators and marketers. Those groups are all trying to sell ideas. Very few of them are interested in bits, bytes or bandwidth.

> *Tomorrow there may be a competitor, numerous competitors or a new technology in our sector. The position has to change — unless we were one of the first ones on the field and are confident that we can take-on all comers. Then we can take the best position — "We're No. 1."*

Your positioning strategy should consider the various markets that you serve. Even in-house, you might serve more than one set of interests. If you sell products, each has a position and the company itself has a position.

One of the best positioning strategies we've seen is from Intel. Each Intel product that we deal with has a well-defined position, but the real marketing genius is the company's positioning in the "Computer within" campaign. While most of us haven't a clue who makes the carburetor, transmission or even engine in our car, Intel has got us thinking about what is under the hood of our computers... and thinking about what sort of brain we'll need in our next computer and who makes the best video compression chip set. They've got other

market segments thinking about what brand of chip they should imbed in their microwave oven controls, jet engine fuel controls, automobiles and thermostats. The Intel positioning strategy does another important thing outside Silicon Valley — it positions their products not as "chips" but as full-fledged computers. What's more valuable, a product that has an imbedded "chip" or one that has an "on-board computer?"

Here's another positioning example close to home, in fact at home. Our position statement is: Multimedia Computing Corp. is the definitive source of information on communications and information management for the industry, investors and the end user.

This newsletter's position is Multimedia Computing Corporation's "how-to report for communications professionals." In both cases, the company name — Multimedia Computing — is part of the position.

In an infant industry like ours, there isn't much competition. Most positioning statements and strategies are going to concentrate on explaining what the company, product and service do for the client. Statements like "We can do anything," don't say anything and statements like, "We do the best 3-D animation," don't mean enough, unless you're working for Disney.

Positioning parameters

Product and company position can be articulated on a wide range of parameters. You're not stuck with choosing one from column 'A', two from 'B'. Take all you need:

- The product or service — what it does, how well it performs, how fast, what it replaces
- Price/value — store-brand, top-of-the-line, features per dollar, effectiveness per dollar
- Potential — save money, make money, increase productivity, decrease staff
- Service — what comes with basic product —

training, documentation, office-calls for repair, guarantees, upgrades, new employee training

- Clients — profitable companies use our product, high-tech companies, great communications companies, influential companies, companies that persuade, high-growth companies
- Sector — public, private, religious, military, education
- Investors — smart money backs hot products
- Competition — we're better than ...because
- Comparisons — it's the Rolls Royce of ... it's the Volkswagen, Dom Perignon, Michelangelo
- Origins/components — Bell Lab engineers, PARC scientists, Motorola chips, Bob Abel idea, National Geographic video
- The Problem — the Excedrin Headache strategy, defining the product in terms of the problems it solves

Review and revision

Positioning is the easiest marketing idea to understand. It is also the most important, particularly in start-ups. Yet it is often ill-considered or missing entirely from many marketing plans. It's worth as many hours of thought as it takes (and perhaps a couple of bucks of a consultant's time) to get it right.

It's a strategic consideration in a dynamic game. Today, we battle in a marketplace of ignorance and tight budgets. We shape positions, create products and services that address those conditions. Tomorrow there may be a competitor, numerous competitors or a new technology in our sector. The position has to change — unless we were one of the first ones on the field and are confident that we can take-on all comers. Then we can take the best position — "We're No. 1."

Dan Ryder is the vice president of Multimedia Computing Corporation. Send Dan your marketing questions — see addresses on page two.

Product Reviews

This section summarizes a variety of major publications' reviews of hardware and software products relevant to interactive multimedia. For additional information, contact the publishers. The full text of many of these reviews is also available in electronic form via CompuServe and other on-line services.

Presentations graphics

IBM Storyboard Live! — $495 (IBM). IBM's "multimedia presentation software" received a very negative review for being overly complex and confusing. Screen capture and picture painting were cited as particularly weak; story presenting was "merely adequate." The application was rated (on a scale of one to four): performance — 1; ease of use — 1; value — 2. *Philip Robinson in the San Jose Mercury News 12/23/90.*

IBM Desktop Software, Applications Systems Division, 472 Wheelers Farms Road, Milford, CT 06460; (404) 956-4000.

Charisma 2.0 — $495 (IBM). Pros include comprehensive numerical charting and drawing, many import and export file formats, large clip art library, fine font support. Major drawback was that it is more difficult to learn than PowerPoint for Windows. Was described as "a good choice for users with strong drawing backgrounds." *InfoWorld, 11/19/90.*

Micrografx Inc., 1303 Arapaho, Richardson, TX 75081; (214) 234-1769; (800) 733-3729.

Draw Perfect 1.1 — $495 (IBM). Pros were numeric charting and drawing capabilities, exceptional output support and technical support policies. Cons were the lack of data manipulation options and a confusing user interface. "Hardcore Word Perfect users will be attracted to Draw Perfect's similar command structure." Described as more of a charting application than a presentation tool. *InfoWorld, 11/19/90.*

Word Perfect Corp., 1555 N. Technology Way, Orem, UT 84057; (801) 225-5000; fax (801) 222-5077.

Freelance Plus 3.01 — $495 (IBM). Pros were a powerful set of drawing tools and superior speed. Cons were the text-mode data entry interface and limited color options. "... Still may be the choice for power Lotus 1-2-3 users... is rapidly being overshadowed by the full-time graphics products." *InfoWorld, 11/19/90.*

Lotus Development Corp., 55 Cambridge Pkwy., Cambridge, MA 02142; (617) 693-8500; (800) 343-5414.

Harvard Graphics 2.3 — $495 (IBM). Pros were strong numerical charting and drawing. Cons were a text-based interface, limited color support and below-average ease of use. "... Suitable for the occasional user who wants to create simple charts or for the advanced user who needs extensive customizing and drawing tools... Cumbersome to use when compared to the graphics-based competition." *InfoWorld, 11/19/90.*

Software Publishing Corp., P.O. Box 7210, 1901 Landings Drive, Mountain View, CA 94039-7210; (415) 962-8910.

PowerPoint for Windows 2.0 — $495 (IBM). Described as the "best presentation organizing features of the [IBM and compatible] products; extremely intuitive; excellent use of color." Cons include weak drawing, numerical charting, few screen-show special effects and high disk usage. "The best choice for the occasional presentations graphics creator who needs to knock out fast charts with a minimum of effort." *InfoWorld, 11/19/90.*

Microsoft Corp., 1 Microsoft Way, Redmond, WA 98052-6399; (206) 882-8080.

More 3.0 — $395 (Macintosh). Pros include superior outlining, excellent drawing, text and presentation tools, import/export options. Cons were the separate graphing module, difficulty in learning. "An excellent choice" for those who are power users of outlining on the Mac. *InfoWorld, 11/19/90.*

Symantec Corp., 10201 Torre Ave., Cupertino, CA 95014-2132; (408) 253-9600.

Aldus Persuasion 2.0 — $495 (Macintosh). Pros are top presentation tools, text charting and ease of use. The only con was that the manuals had not been updated for version 2.0. "... Perhaps the best overall package in the group." *InfoWorld, 11/19/90.*

Aldus Corp., 411 First Ave. S., Seattle, WA 98104; (206) 622-5500.

PowerPoint for Macintosh 2.01 — $395 (Macintosh). Pros were exceptional ease of use, pre-designed color schemes. Cons were the lack of numerical charting or outliner, limited drawing tools, no screen-show special effects. *InfoWorld, 11/19/90.*

Microsoft Corp., 1 Microsoft Way, Redmond, WA 98052-6399; (206) 882-8080.

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In Brief

Texas approves videodisc "textbook"

The Texas Board of Education has adopted "Windows on Science," an interactive videodisc-based curriculum, as a textbook. This is the first time that a computer-based educational product has been permitted to compete directly with traditional textbooks. School districts in Texas can now purchase "Windows on Science" instead of two traditional books.

"Windows on Science" was developed by Optical Data Corp.

William Clark, president and chief executive of Optical Data, called the board's vote "the Lexington-Concord of a revolution which will redefine the textbook industry."

Optical Data Corp., 30 Technology Drive, Box 4919, Warren, NJ 07060; (201) 668-0022; fax (201) 668-1322.

The Graphix Zone moves

The Graphix Zone, a desktop sales and service center formerly located in a computer retail store, has relocated to a new headquarters in Irvine, Calif. The company plans to establish 12 stores in the United States, working in conjunction with InaComp Computer Center's mainstream reseller program.

The Graphix Zone, 38 Corporate Park, Irvine, CA 92714; (714) 833-3838.

More MacroMind seminars for '91

MacroMind Inc., publishers of MacroMind Director, is expanding its Multimedia Seminar program to include corporate referrals, discounts on third-party hardware, assistance in marketing to new customers and complementary promotional materials. To be au-thorized, MacroMind trainers and developers must attend a "Train the Trainer" or "Interactive Multimedia" workshop offered each month in San Francisco, Chicago and New York (see Calendar for schedule information).

MacroMind Inc., 410 Townsend St., Suite 408, San Francisco, CA 94107; (415) 442-0200; fax (415) 442-0190.

New clip art service information

Dynamic Graphics Inc. has improved its monthly Designer's Club electronic clip art service to include an electronic visual and key word indexing system and new CD-ROM image collections. The monthly issue has been increased to more than 50 EPS and TIFF images. Through Jan. 31, the company is offering three free issues of Step-by-Step Electronic Design to new subscribers to Designer's Club. A free brochure is available by writing or calling the company.

Dynamic Graphics Inc., 6000 N. Forest Park Drive, P.O. Box 1901, Peoria, IL 61656-1901; (800) 255-8800; (309) 688-8800; fax (309) 688-5873.

Bowsher to address SALT

Jack Bowhser, consultant with Anderson Consulting and author of Educating America, will give the keynote address at the concurrent conferences at SALT's Orlando Multimedia '91, which takes place February 20-22.

The conference will include special sessions on interactive multimedia, virtual reality and performance improvement. Allen Abedor will also chair a special session on the International Exchange of Interactive Technologies in Education and Training.

Society of Applied Learning Technology, 50 Culpepper St., Warrenton, VA 22186; (703) 347-0055; fax (703) 349-3169.

Terrajim Smugglers' Notch guide

Terrajim Inc. has produced an information kiosk system for Smugglers' Notch Ski Area & Resort in Jeffersonville, Vermont. The kiosk features an animated guide, "Sherpa," and a database of information about dining, evening entertainment, child care, local attractions. The company describes the information system as "an attraction in and of itself."

Terrajim Inc., Smugglers' Notch, M21, Jeffersonville, VT 05464; (802) 644-2949.

VideoLogic wins $1.9 million order

VideoLogic won an order worth more than $1.9 million to supply 1,000 DVA-4000 digital adapter boards to the Bundespost.

Budespost, Germany's post office, has ordered the adapter boards as part of a new interactive training system.

Nokia Data, the Finnish computer company, will provide PCs specially adapted to Budespost specifications and SONY will provide the disc players.

VideoLogic Inc., 245 First St., Cambridge, MA 02142; (617) 494-0530; fax (617) 494-0534.

Fontographer 3.2: PC Type 1 PostScript fonts for Windows 3.0

Altsys announced a Macintosh version of Fontographer 3.2 that generates fonts for IBM, compatibles and NeXT computers.

The suggested retail price is $495. An upgrade to 3.1 is available for $40. Programs purchased after Nov. 15, 1990 will be upgraded at no charge.

Altsys Corp., 269 W. Renner Road, Richardson, TX 75080; (214) 680-2060; fax (214) 680-0537.

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Farallon ships SoundEdit software and MacRecorder Driver

SoundEdit, sound processing software, allows recording, editing and mixing of voice, music and sound effects. It is designed for Macintosh IIsi and LC models with built-in sound input and output, and works with MacRecorder Voice digitizers.

The MacRecorder Driver allows any MacRecorder digitizer to work with Apple Sound Input Manager 6.0.7. Any MacRecorder can record asynchronously with the same applications that support the built-in microphones in the Macintosh LC and IIsi.

Farallon, 2000 Powell St., Suite 600, Emeryville, CA 94608; (415) 596-9100; fax (415) 596-9100.

Service puts Mac graphics in video

Film Craft Video, a Farmington Hills, Mich.-based teleproduction facility, has introduced several post production services for producers who want to incorporate Macintosh-created graphics.

Film Craft Video transfers graphics and animation to one-inch, Betacam/SP or 3/4 inch/SP formats. Graphics can then be enhanced with the Quantel Paintbox, manipulated with the Kaleidoscope digital effects system and stored, frame-by-frame, on its Abekas A60 digital disc recorder to create multi-layered sequences.

Film Craft Video, 37630 Interchange Dr., Farmington Hills, MI 48331; (313) 567-2300.

Printz demos MOST capability

Mass Optical Storage Technology demonstrated its 128MB 3-1/2 inch magneto-optical disk's capabilities at Comdex with a multimedia presentation by Printz. The animation and soundtrack of the six minute piece played in real time from the magneto-optical disk, allowing display of 32-bit color images and CD-quality audio.

Printz also was retained by Western Development Group to produce a video that would help WDG make its case in the final round of financing of a major real estate development. The seven minute program uses a mixture of location video, animated graphics and photo montage.

Printz, 340 Townsend St., San Francisco, CA 94107; (415) 543-5673; fax (415) 543-5994.

Macworld presses 15,000 "interactive magazines"

Macworld Interactive combines the attributes of the printed page with interactive hypermedia navigation on CD-ROM. It interleaves articles from the June 1990 issue of *Macworld* relating to 3D rendering with photorealistic images, animation and sound. The metaphor for browsing allows complete interactive navigation by the user.

The product was designed by Multimedia Resource Group, using Authorware Professional.

Macworld Interactive is a consortium project of Authorware, Inc., Macworld magazine, Pixar Corp., Electric Image, Intuitive Music, Meridian Data, the 3M Corporation and Multimedia Resource Group.

The consortium plans "one or two" issues this year.

Authorware Inc., 8500 Normandale Lake Blvd., Ninth floor, Minneapolis, MN 55437; (612) 921-8555.

Jostens picks Authorware

Jostens Learning Corporation announced a partnership with Authorware, Inc. to deliver Josten's K-3 Primary Language Arts Program on networked Macintosh LCs.

Authorware Inc., 8500 Normandale Lake Blvd., Ninth floor, Minneapolis, MN 55437; (612) 921-8555.

Snader forms multimedia division

Snader and Associates announced a new computer-video systems division, which will provide integrated desktop video solutions. Morgan Rees, formerly with Ikegami Electronics, will head the new unit.

R.E. Snader and Associates Inc., 475 Gate Five Road, Sausalito, CA 94965; (415) 332-7070; fax (415) 331-331-1643.

100th Avid/1 sold

Avid Technology shipped 100 systems since the first one left the factory about a year ago. The "century" system was purchased by Universal Recording of Chicago, which recently joined forces with Edit/Chicago, Edit Express and Center City Studios

Avid Technology Inc., 3 Burlington Woods, Burlington, MA 01803; (617) 221-6789; fax (617) 221-6799.

OWL to support Windows 3.0

OWL's Guide Media Extensions expands the range of media types that authors can incorporate in Guide documents. Developers will be able to embed animation, digital audio and music in on-line documents in addition to the text, graphics and video that are currently available.

The company expects beta versions to be available to developers soon and will integrate the extensions in a future version of Guide.

OWL International Inc., 2800 156th Avenue SE, Bellevue, WA 98007; (206) 747-3203; fax (206) 641-9367.

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New versions of Meridian Data development system

Meridian Data announced new versions of its CD-ROM-based development systems for the Microsoft Windows graphical environment.

The company's VR Producer is a development system that handles all the steps required to produce multimedia CD-ROM applications and VRS Professional is used in low-volume production of CD-ROM.

Prices for the VR Producer start at $29,995 while the VRS Professional starts at $36,000.

Meridian Data Inc., 5615 Scotts Valley, Scotts Valley, CA 95066; (408) 438-3100; fax (408) 438-6816.

Autodesk makes animation files Windows-compatible

Autodesk, Inc. announced that it will make FLI files produced by its MS-DOS-based 2D and 3D animation programs accessible under the multimedia extensions to Microsoft Windows.

The Autodesk Windows Player is implemented as a Dynamic Link Library (DLL), which means it can be accessed by other Windows 3.0 applications, including multimedia authoring tools.

Autodesk Inc., 2320 Marinship Way, Sausalito, CA 94965; (415) 332-2344; fax (415) 331-8093.

Authorware to support Windows multimedia extensions

Authorware plans to have its final version of Authorware Professional for Windows ready to ship following the full release of Microsoft's multimedia extensions in the first half of this year.

Authorware Inc., 8500 Normandale Lake Blvd., Ninth floor, Minneapolis, MN 55437; (612) 921-8555.

AimTech Corp., currently shipping version 3.0 of IconAuthor and related products, IconAnimate and RezSolution, announced that the enhanced versions of IconAuthor will ship concurrently with the release of Windows 3.0 multimedia extensions.

AimTech Corp., 77 Northeastern Blvd., Nashua, NH 03062; (603) 883-0220.

Zenith to offer multimedia PC in '91

Zenith Data Systems (ZDS), a Groupe Bull company, announced that it is developing a personal computer built around the multimedia extensions to Windows.

Planned for introduction in the first half of 1991, the '386-based PC will have an updated version of MS-DOS operating system.

The company plans to focus on training and simulation-oriented applications for large business, government and education.

The multimedia Windows environment on the ZDS PC can serve as a front end to "IMAGEWorks," an open systems, server-based document management system that provides archival retrieval of text, graphics and pictures.

"IMAGEWorks" is a product of Bull HN Worldwide Information Systems, Inc. in Billerica, Mass.

Zenith Data Systems, 1501 Feehanville Drive, Mount Prospect, IL 60056; (708) 699-4848.

NEC multimedia task force

NEC Technologies plans to develop a multimedia PC by mid 1991. The multimedia task force will work in conjunction with NEC business groups, the NEC Development Center in Boxborough, Mass. and the NEC Technology Center in San Jose, Calif.

The task force is under Senior Vice President Keith Schaefer with Marc Miller as director of strategic planning.

NEC Technologies Inc., 1225 Michael Drive, Wood Dale, IL 60101; (708) 860-9500 ext. 4073.

Storm licenses JPEG software technology to Adobe

Paving the way for acceptance of its JPEG-compatible image compression software as an industry standard, Storm Technology licensed its compression technology to Adobe Systems. The license is for source and object code for Storm's implementation of the basic JPEG still image compression algorithm.

Storm is a full member of the joint ISO/CCITT JPEG and MPEG standards committees.

Storm Technology, 220 California Ave., Suite 101, Palo Alto, CA 94306; (415) 322-0506; fax (415) 322-2439.

Audio cards for Windows

Creative Labs, creator of the Sound Blaster, signed a worldwide licensing agreement with Microsoft for windows-based multimedia environment.

As part of its agreement, Creative Labs will deliver audio cards and update kits to support Windows this year.

The upgrade kit will be priced under $900.

Creative Labs Inc., 2050 Duane Avenue, Santa Clara, CA 95054; (408) 986-1461; fax (408) 986-177.

Fujitsu revs up for Windows

Fujitsu plans to market Windows-capable products beginning in the second half of this year.

The company says that it has been working closely with Japanese and U.S. software developers to ensure the availability of a broad range of products in a wide range of markets.

Fujitsu and a U.S. subsidiary have established support centers in

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Tokyo and San Francisco to provide technical and CD-ROM mastering support for independent software developers.

Fujitsu Ltd. (408) 432-1300.

CompuADD announces Windows, other multimedia products

CompuADD, with 89 company-owned stores and a No. 1 customer satisfaction rating in a recent Dataquest survey, joins the Windows movement with an announcement that they are developing multimedia products for '286, '386 and '486-based machines.

CompuADD, 12303 Technology Blvd., Austin, TX 78727; (512) 250-2000.

AT&T announces Windows support

AT&T Computer Systems said it will provide resources to help develop the emerging multimedia market and will license Microsoft's multimedia extensions to Windows.

The company said that its networked computing experience and AT&T Bell Laboratories' research and development in speech processing will help it integrate multimedia into its Rhapsody Business Orchestration Solution. Rhapsody is an object-oriented networked solution that integrates personal productivity tools, electronic messaging and a graphical user interface with a feature called "workflow automation."

AT&T Computer Systems (201) 898-6548.

Bell Atlantic to market Baker Videoactive's programs and services

Baker Videoactive Corp. has entered a marketing agreement with Bell Atlantic Network Services Inc. Under the agreement, Bell Atlantic's Software Services Group will market Baker's programs and services in the United States and Canada.

The first product to be marketed under the agreement is "Touch & Go," an interactive touchscreen kiosk that allows college students to order telephone service.

Baker Videoactive Corp., 4159 Main St., Philadelphia, PA 19127-2193; (215) 482-2900; fax (215) 482-3473.

Arts & Letters Graphics Editor update

Computer Support Corp. has announced version 3.1 of the Arts & Letters Graphics Editor for IBM and compatibles with Microsoft Windows. Enhancements include a warp/perspective function that modifies text, clip art and freeform graphics and a graduated fill function.

Support for Adobe Type 1 fonts to allow font editing is included. Charts can now be imported from Excel, Lotus 1-2-3 and other applications that support DIF, SYLK and ASCII formats.

Computer Support Corp., 15926 Midway Road, Dallas, TX 75255; (214) 661-8960; fax (214) 661-5429.

New Products

CD-ROM Directory on Disc

UniDisc has announced a directory of products and companies in the CD-ROM market. The "CD-ROM Directory on Disc" was compiled by TFPL, a London-based directory publisher. Information on 1,522 CD-ROM and multimedia titles is included, as well as 1,800 company profiles. The directory has a list price of $149.

UniDisc, 3941 Cherryvale Ave., Suite 1, Soquel, CA 95073; (408) 464-0707; fax (408) 464-0187.

Video tuner for Sun workstations

RasterOps Corp. has announced the Video Tuner daughter card for its Sparc Card TC PIP, which adds television reception with on-screen control to its 24-bit television-in-a-window card for Sun Microsystems' SparcStation. The Video Tuner allows users to control audio, channel, contrast, brightness and volume from an on-screen control panel, while receiving UHF or VHF signals from an antenna or cable television. The product has a built-in audio amplifier and speaker. The suggested retail price for the Video Tuner is $495. It is scheduled to ship this month. The Sparc Card TC PIP has a suggested price of $6,990 and is shipping now.

RasterOps Corp., 2500 Walsh Ave., Santa Clara, CA 95051; (408) 562-4200; fax (408) 562-4065.

HyperCard for the Apple IIGS

Apple Computer Inc. has introduced HyperCard IIGS, an information management application for the Apple IIGS personal computer. The product has the full functionality of Macintosh HyperCard version 1.2.5, plus improvements that increase performance and take advantage of the AppleIIGS' color capabilities.

HyperCard IIGS will be sold only as a stand-alone kit, with six program disks and three manuals. Nine ready-made stacks are included. The application requires an Apple IIGS with 1.5MB for memory (2MB recommended), system software 5.0.4, one 800K disk drive and a hard disk or connection to a network. The list price is $99. The application is scheduled to be available in mid-February.

Apple Computer Inc., 20525 Mariani Ave., Cupertino, CA 95014; (408) 996-1010.

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JPEG image compression for IBM

Xing Technology Corp. has announced a grey-scale and full-color image compression software package for IBM and compatible personal computers. VT-Compress will compress images up to 100-to-1. It is available for systems based on '286 and '386 microprocessors and takes about 8 seconds to compress or expand a 512-by-512, 24-bit Targa or TIFF image (768K) on a 25 MHz '386 system. The package has a suggested price of $179 and is scheduled to ship on January 10.

Xing Technology Corp., P.O. Box 950, 456 Carpenter Canyon, Arroyo Grande, CA 93420; (805) 473-0145; fax (805) 473-0147.

SantaFe Media Manager LAN version

HSC Software has announced a local-area network version of its multimedia software application, SantaFe Media Manager. The LAN version supports Netware, Vines, LAN Manager and other major networks.

HSC also announced that Merisel Inc. will be its exclusive U.S. distributor and non-exclusive international distributor.

HSC Software, 1661 Lincoln Blvd., Suite 101, Santa Monica, CA 90404; (213) 392-8441; fax (213) 392-6015.

So. California maps available

Thomas Bros. Maps has announced mapping software for Los Angeles and Orange counties in southern California. The GeoFinder software ties database records to color map graphics of primary streets, cross streets and city boundaries, as well as quickly locating addresses. The software supports creation of new database files or use of dBase III-compatible files. The Los Angeles County version is $795, the Orange County version is $695 and the combined products are $995. The company is offering a $200 discount through Jan. 30.

Thomas Bros. Maps; (800) 899-6277 ext. 91; (714) 863-1984.

Image and audio libraries

Applied Optical Media has released its first group of Mediasource CD-ROM libraries of images and audio for desktop multimedia development. Each includes 1,500 images and more than 90 minutes of music and sound effects, which include rights for reuse of the material in computer-based presentations.

Each product includes search and retrieval software with hypertext features to enhance browsing. The first disks have files digitized in AVC format for use with IBM's Audio Visual Connection software. Future releases will address all significant multimedia platforms and authoring tools.

Libraries now available:
- General Topics, vol. 1 — a broad selection of subject matter with a collection of full-color images for promotion and advertising.
- General Topics, vol. 2 — full-color images that complement the content in vol. 1. Contains more things and fewer people.
- Historical — black and white photographs and drawings depicting important figures and incidents from antiquity through World War II.
- Military/Aerospace — aircraft, vehicles, ships and personnel of the U.S. armed forces. Includes images from space probes and satellites with spacecraft and NASA personnel.
- Natural Sciences — color images of a wide variety of animals, plants, geological formations and minerals with scenes on environmental science, energy, astronomy and the physical sciences and agriculture.

The company plans to release the following disks in the next three months: Corporate & Industrial, International, Medicine & Health Care, Personalities, Sports.

Each library has a list price of $395.

Applied Optical Media Corp., 18 Great Valley Parkway, Suite 160, Malvern, PA 19355; (215) 889-9564; fax (215) 993-8392.

Headland Windows hardware

Headland Technology Inc. is developing an upgrade card for AT bus IBM-compatible computers to meet Microsoft Corp.'s specifications for a Windows multimedia platform.

The Video Seven multimedia board integrates a CD-ROM interface with audio and video capabilities. It provides a 512K VGA card with 256 colors in 640-by-480 resolution, CD-ROM drive and controller, on-board FM synthesizer, MIDI support, joystick port and an audio mixer. The company plans to deliver the product in the first half of this year.

Headland Technology Inc., 46221 Landing Pkwy., Fremont, CA 94538; (415) 623-7857.

MacroMind Windows players

MacroMind Inc. has announced the Windows Player Development Kit and the Windows Player License Pack for Microsoft Windows 3.0 and Windows with multimedia extensions. The development kit will enable developers to convert MacroMind Director interactive multimedia documents created on the Macintosh to be played back under Microsoft Windows 3.0 and

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Windows with multimedia extensions. The license pack will allow users to view interactive MacroMind Director documents under Windows 3.0 or Windows with multimedia extensions.

MacroMind Inc., 410 Townsend St., Suite 408, San Francisco, CA 94107; (415) 442-0200; fax (415) 442-0190.

Video software for Macintosh

Workstation Technologies Inc. has announced VideoClips software for recording, editing and playback of live video sequences on a Macintosh hard disk, using the company's Moonraker video digitizing card to capture the video. Playback and editing does not require special hardware. The software allows the user to store and retrieve digitized video sequences with selectable duration, capture rate and window size, which are limited by hard disk size and throughput. The video files can be converted to PICS format. A standalone application as well as XCMDs for use with HyperCard, SuperCard MacroMind Director and other applications are included. The software is in beta test and is scheduled to ship at the end of this month. The suggested list price is $295.

Workstation Technologies Inc., 18004 Sky Park Circle, Suite 240, Irvine, CA 92714; (714) 250-8983; fax (714) 250-8969.

Text retrieval for HyperCard 2.0

KnowledgeSet has released a new version of its HyperKRS full-text indexing and retrieval software for use with HyperCard 2.0 from Claris Corp. HyperKRS 2.0 has new features including international and special-character support, expanded stack handling capability and stop word list. The software is provided as a set of XCMDs and XFCNs. The suggested price for a starter kit is $195. Upgrades from version 1.1 to version 2.0 are $29.95

KnowledgeSet Corp., 888 Villa St., Suite 500, Mountain View, CA 94041; (415) 968-9888; fax (415) 968-9962.

Digital Darkroom 2.0 ships

Silicon Beach Software has shipped Digital Darkroom 2.0, a new version of the company's gray-scale image processing software for retouching, enhancing and composing scanned photographs and other bit-mapped graphics on the Macintosh. New features include image, scanner and printer calibration, real-time transformations, colorization, image composition controls, sophisticated painting tools, precise layout tools and multiple open documents. Version 2.0 has a suggested list price of $395. Upgrades from version 1.0 or 1.1 are $75.

Silicon Beach Software, 9770 Carroll Center Rd., Suite J, San Diego, CA 92126; (619) 695-6956; fax (619) 695-7902.

3D 24-bit graphics for Mac

Ray Dream Inc. has announced that it is shipping Ray Dream Designer, a 3D graphics environment for creation of high-resolution, 24-bit photorealistic color renderings. The product has two modules. LightForge is a surface modeler with sophisticated shading capabilities. SceneBuilder is a set of 3D scene description tools and photorealistic engines. Shapes are drawn using 3D extensions to familiar computer drawing tools such as Bezier curves, splines, polygons and ellipses. Shades are added using properties such as reflection and transparency. Painted and scanned images can be wrapped around the surface of objects. Texture editors can simulate a wide variety of materials. Parts and pieces are manipulated in space and assembled into 3D scenes of arbitrary complexity, rendered by a photorealistic ray-tracer. Ray Dream Designer has a suggested list price of $895. It is available now.

Ray Dream Inc., 320 Grandview Drive, Woodside, CA 94062; (415) 851-0942; fax (415) 851-3065.

Bitstream ships Type 1 Mac fonts

Bitstream Inc. is shipping version 2.0 of the Bitstream Typeface Library for the Macintosh, which is hinted according to PostScript Type 1 specifications. This improvement assures excellent quality on screen displays running Adobe Type Manager as well as low-resolution printers. The fonts have also been enhanced with a new easy-to-use naming convention and a desk accessory called the Bitstream Analogue, which gives a directory of font names for every typeface in the library.

Individual typefaces will still be $45. Upgrades will be free to those purchasing faces from Oct. 4 to Dec. 10 of last year. Others will be charged on a sliding scale with a maximum of $5 per face.

Bitstream Inc., Athenaeum House, 215 First St., Cambridge, MA 02142; (617) 497-6222.

Computer-controllable S-VHS VCR

Selectra has announced the Selectra/Panasonic AG-1960/RS, a computer-controllable, Super-VHS videocassette recorder. The product comes with software drivers in C, XObjects and XCmds and demonstration software. HyperCard, SuperCard and Windows 3.0 toolkits also are available. Editing and other applications software is under development for these systems and the Commodore Amiga. The list price of the AG-1960/RS is $2,195.

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Selectra, P.O. Box 5497, Walnut Creek, CA 94596; (415) 284-3320; fax (415) 283-1670.

Multimedia CD-ROM tools

Tiger Media has announced CATS CD Manager, a programming tool for multimedia CD-ROM tools. CATS is Tiger Media's CD Authoring Tools System, a Sun SparcStation application.

CATS CD is Tiger Media's CD Authoring Tools System. The CD Manager includes a C function library for controlling all aspects of CD-ROM, CD-Audio and mixed mode read and play, as well as drive functions and status. Also included are command line utilities for CD audio play control.

Tiger Media, 5801 E. Slauson Ave., Suite 200, Los Angeles, CA 90040; (213) 721-8282; fax (213) 721-8336.

People

Bill Peters is the manager of the new Western Branch office of **Discovery Systems**. Discovery Systems provides CD-ROM mastering and replication.

Discovery Systems, 7001 Discovery Blvd., Dublin, OH 43107 (614) 761-2000. Western Branch Office, San Francisco; (415) 726-5984; fax (415) 726-5385.

Encore! Productions & Entertainment has named **Ellen Walker-Fish** as a producer; **Danna Lopez** as production coordinator; **Regina Greene** as an account executive; and **Jodi-Anne Indiveri** as administrative assistant.

The company specializes in creation of audiovisual, video and multimedia presentations for corporate meetings, training programs and corporate image events.

Encore! Productions & Entertainment, Denville, NJ; (201) 428-1188.

Requests For Proposals

Interactive videodisc programs

Contact Margaret Wilson, (904) 452-9902. Off-the-shelf interactive videodisc training programs in electrical/electronic theory, 14 each; valve repair, 186 each to include four (4) one-year options for Electronic Skills, 46 each year and electronic theory, 43 each year. Must be compatible with Matrox EIDS Interactive Videodisc System (IBM PC/AT compatible, VGA display display with light pen interface, videodisc player controlled by Com 4 Port). Delivery within 30 to 60 days after date of contract to Naval Surface Reserve Force, New Orleans, Louisiana. All responsible sources may submit an offer which will be considered.

Sponsor: Contracting Officer, Code 201, Naval Supply Center, Pensacola FL 32508-6200

Interactive videodisc (Laservision) mastering & replication

SOL F04702-91-B-0001. Due 2/07/91. Contact R Wiley (714) 382-3313. Contracting Officer, Isabella Dunham (714) 382-3313. Mastering and replication of interactive videodisc from government-provided 1-inch videotape, producing master discs, proof discs and replicated discs. Interactive videodisc formats shall be CAV level I/III, CAV level II discs with digital dump or CLV formatted as program content and productions require. As a result of the solicitation, a requirement contract will be issued for a 12-month period. Delivery to various locations will be specified on each delivery order issued thereunder. Solicitation to be issued on Jan. 7, 1991. All responsible sources may submit a written request for a copy of the solicitation which will be considered.

Sponsor: Contracting Section, 1352 AVS/LGC, Bldg 248, Norton AFB, CA 92409-5996.

Interactive videodisc programs

Due 1/29/91. Contact Margaret Wilson (904) 452-9902. Off-the-shelf interactive videodisc training programs for base year in pipe fitting, 90 each; hand tools and measuring instruments, 90 each, digital electronic theory, 90 each; instrument calibration, 90 each; rotating predictive maintenance & alignment, 87 each; to include four (4) one-year options for pipe fitting, 34 each year; hand tools & measuring instruments, 34 each year; digital electronic theory, 34 each year; instrument calibration, 34 each year; and rotating equipment predictive, 37 each year. Must be compatible with Matrox EIDS Interactive Videodisc System (IBM PC/AT compatible, VGA display with light pen interface, video disc player controlled by Com 4 Port). Delivery within 90 to 120 days after date of contract to Naval Surface Reserve Force, New Orleans, Louisiana. All responsible sources may submit an offer which will be considered.

Sponsor: Contracting Officer, Code 201, Naval Supply Center, Pensacola, FL 32508-6200.

Training assistance and support

SOL RS-PER-91-348. Due 2/7/91. Contact Teresa McLearen, (301) 492-4290; Contracting Officer, Elois

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Wiggins (301) 492-4210. The NRC requires assistance in instructional design services. Contractor shall assist in providing a systematic approach to defining and assessing incoming requests for training support; and research, recommend, and prepare plans for solutions to performance problems. The work to be performed will be delineated in individual task orders. NRC anticipates issuing task orders amounting to 3,000 to 4,500 hours under this contract. Tasks may vary from preparing materials and data for a one-to two-hour training/briefing to systematically analyzing and designing solutions to performance problems. Products will typically include design and analysis reports, prototype training information and recommendations. The problems NRC will present will vary from administrative policy to nuclear reactor operations. Subject matter will be provided by the NRC or specifically requested from the Contractor. Task orders will require knowledge in the use of a variety of media, such as computer, videodisc, videoconferencing, multimedia combinations, slides, overheads, and published print. All work will be generated from NRC Headquarters located in Bethesda and Rockville, Maryland, with the rare possibility of travel to NRC's five regional sites (Philadelphia, Atlanta, Chicago, Dallas, San Francisco) and the Technical Training Center in Chattanooga, TN. Period of performance is two years with one-year option. Interested firms should submit written requests to U.S. Nuclear Regulatory Commission, Division of Contracts and Property Management, Attn: Michelle DeBose, RFP RS-PER-91-348, Mail Stop P-1020, Washington, DC 20555. Issue date on or about January 7, 1991. Tele-

phone requests will not be honored.

Sponsor: U.S. Nuclear Regulatory Commission (NRC) Division of Contracts and Property Management, Washington, DC 20555.

Curriculum development

SOL N00612-91-R-7002. Due 1/19/91. POC Contact C. Rauton, Code 202.1M, 803/743-4174, Contracting Officer, P. L. Majewski. Curriculum Development as required by the Naval Education and Training Program Management Support Activity (NETPMSA), Pensacola, FL. Requirements involve, but are not limited to, four (4) general areas: (1) Print Materials, e.g., Instructor Guide (IG), Student Guide (SG), 35mm Slides, Self-Study Workbook (SSWB), Exercise Controller Guide (ECG) and Navy Training Plans (NTP); (2) Interactive Courseware (ICW) which encompasses Computer Based Training (CBT) and Interactive Videodisc (IVD) Training; (3) Videotape (V/T); and (4) other training products not identified above. All efforts will be in accordance with Instructional System Development (ISD) methodology as set forth in MIL-STD 1379. The proposed contract will be Time and Material, Indefinite Quantity, with fixed rate, fixed price delivery orders issued. Proposal will be required to demonstrate offeror's ability. Award will be based on other factors and price. The period of performance includes a base year with two (2) one (1) year option periods. The proposed contract is 100% set aside for small business concerns.

Sponsor: Regional Contracting Dept. Naval Supply Center, Bldg. 198 Charleston, SC 29408-6300.

Contracts Awarded

Laser videodisc production

Stokes Imaging Services, Austin, TX 78752. Amount $137,533. Dated 9/21/90.

Sponsor: Library of Congress, Contracts & Logistics Services, 1701 Brightseat Road, Landover, MD 20785-0000.

Calendar

IICS San Francisco Chapter

January 8, Exploratorium, San Francisco
Compressed Video Shoot-Out
IICS SF Chapter, P.O. Box 1372, San Carlos, CA 94070; (408) 747-1101.

MacWorld Expo

January 10-13, San Francisco
Mitch Hall & Assoc., (617) 361-8000

Winter Consumer Electronics Show

January 10-13, Las Vegas
Electronics Industries Association (202) 457-8700

Computer Graphics Show

January 15-17, Javits Convention Center, New York City
Annual showcase of visual communications. Addresses integration of electronic visual communication tools in presentations, art and design, electronic publishing, animation, corporate video, multimedia.
Mijo Inc., 817 Silver Spring Ave., Suite 409, Silver Spring, MD 20910-9894; (301) 587-4545.

Calendar

Desktop Video Expo

January 22-23, Sheraton Hotel, Burlingame, Cal.

How-to workshops on various types of desktop video and multimedia equipment.

R.E. Snader and Associates, Inc., 475 Gate Five Road, Sausalito, CA 94965; (415) 332-7070

Future Tense

January 24-26, Los Angeles Hilton and Towers, Los Angeles

Sponsored by the Getty Center for Education in the Arts. Speakers include Lucie Fjeldstad, IBM president of multimedia and education, Seymour Papert of the MIT Media Laboratory, Bob Stein of Voyager, Robert Abel of Synapse, Stan Cornyn of Warner New Media, many others.

Getty Center Conference, c/o Pacific Visions Communications, 9000 Sunset Blvd., Suite 700, Los Angeles, CA 90069; (213) 274-8787.

EdNet FOCUS: Business Strategies in Distance Learning/Florida Educational Technology Conference

February 4-5, Tampa, Fla.

Sessions cover distance learning's impact on educational markets for textbooks, PC software and hardware, videotape and film and telecommunications equipment and services.

Nelson B. Heller and Associates, 707 Skokie Boulevard, suite 600, Northbrook, IL 60062, (708) 205-4390

AECT '91/INFOCOMM/Amigacomm/ National University Teleconferencing Network

February 13-17, Orlando, Florida

Sponsored by the Association for Educational Communications and Technology. Speakers include Dr. Fred T. Hofstetter, Associate Provost for Academic Computing and Instructional Technology at the University of Delaware, Christopher Cross, Assistant Secretary of the U.S. Department of Education's Office of Educational Research and Improvement, Eliot Wigginton, founder of Foxfire and Wally Harper, Manager of Audio Visual Production at EPCOT Center.

AECT Registrar, 1025 Vermont Ave, NW, suite 820, Washington, DC 20005, (202) 347-7834, Fax (202) 347-7839

SALT Conference/Orlando Multimedia '91

February 20-22, Hyatt Orlando Hotel, Kissimmee, Florida

Ninth conference on interactive instruction delivery; sixth conference on health care sciences. The conference will include special sessions on interactive multimedia applications, virtual reality and East-West relationships in developing interactive training technology applications.

Society for Advanced Learning Technology, 50 Culpepper St., Warrenton, VA 22186; (703) 347-0055.

Video Expo/CAMMP

March 4-8, Civic Auditorium, San Francisco

Exhibits of video and multimedia hardware and software, seminars on multimedia applications, legal issues, marketing and production.

Mind over Media *contributors will be featured. Dan Ryder, vice president of Multimedia Computing Corp., will speak on marketing multimedia; Charles Wyke-Smith, president of Printz, will present seminars on MacroMind Director;*

Mary Duda, president of Duda Design, will speak on creating interactive multimedia products.

Knowledge Industry Publications, Inc., 701 Westchester Ave.,White Plains, NY 10604, (914) 328-9157

Windows and OS/2 Conference

March 5-7, San Jose Convention Center

Tracks designed for people responsible for evaluating computer technology and products for use in government and industry. Nick Arnett, president of Multimedia Computing Corp. will speak on digital video.

CM Ventures, Inc., 5720 Hollis Street, Emeryville, CA 94608, (415) 601-5000.

Computer Game Developers' Conference

March 9-12, Hyatt Hotel, San Jose

Fifth international gathering of computer game developers. Planned sessions include artificial character development, CD-ROM-multimedia and virtual reality.

Computer Game Developers' Conference, 5339 Prospect Rd., Suite 289, San Jose, CA 95129; (408) 946-4626; fax (408) 379-4954.

Ninth Annual Technology and Innovations in Training Conference

March 11-15, San Antonio

American Defense Preparedness Association, contact Frank Schufletowski, (512) 652-6169

Hanover Fair CeBIT '91

March 13-20, Hanover, West Germany

Hanover Fair will include a USA Graphics, Imaging and Multimedia Pavilion, a showcase for computer

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graphics, desktop publishing, desktop presentations, imaging and desktop video.

Hanover Fairs USA Inc., 103 Carnegie Center, Princeton, NJ 08540; (609) 987-1202; fax (609) 987-0092.

Sixth International Conference and Exposition on Multimedia and CD-ROM

March 18-20, San Jose Convention Center

Product introductions, tracks on technology and design, business/marketing distribution, corporate solutions. Bill Gates, chairman of Microsoft Corp, keynotes, Nick Arnett, president of Multimedia Computing Corp. will moderate a panel on digital video.

Galaxy Registration, P.O. Box 3379, Frederick, MD 21701, (800) 255-7798

CAPP '91 Expo and Conference

March 20-21, Techmart, Santa Clara, Cal.

Sessions on desktop publishing and multimedia technology for PR/marketing communications personnel, publishers, advertising agencies, graphic designers and illustrators, training and education specialists.

Techmart, 5201 Great America Parkway, Santa Clara, CA 95054, (408) 562-5700

Computer-Based Training Conference & Exposition

April 7-10, San Antonio, Marriott and Convention Center

For managers, authors and trainers.

Weingarten Publications, 38 Chauncy St., Boston, MA 02111-2369; (617) 542-0146.

NCGA'91 Conference and Exhibition

April 22-25, McCormick Place North, Chicago

Sessions on engineering, graphic design and publishing, architecture, MIS/IRM, research and development, manufacturing and operations, marketing, sales and finance. Nick Arnett, president of Multimedia Computing Corp. will speak on graphics in multimedia.

National Computer Graphics Association, 2722 Merrilee Drive, suite 200, Fairfax, VA 22031, (800) 225-NCGA

Multimedia Expo

May 14-16, New York

American Expositions (212) 226-4141.

Training

Avid/1 Media Composer Hands-on Seminars

January 9-11, New York City, School of the Visual Arts

January 22-21, Detroit, Michigan State University

February 5-7, Chicago, Apple Training Center

February 20-21, Minneapolis, Minneapolis Convention Center

March 5-6, Denver, Sheraton Denver Tech Center

March 19-20, San Francisco, Contract Design Center

Seminars include three hours of in-depth presentation on the Avid non-linear video editing system with two hours of hands-on editing on the Avid/1 Media Composer. Tuition is $75, with industry organization discounts available.

Avid Technology Inc., 3 Burlington Woods, Burlington, MA 01803; (617) 221-6789 ext. 59; fax (617) 221-6799

MacroMind Multimedia Seminars

Interactive Multimedia Courses:

January 10-11, Chicago; January 24-25, New York; January 31-February 1, San Francisco

Day one examines the interactive extensions in MacroMind Director 2.0, includes development of a sample presentation. Day two is an advanced look at interactivity and programming concepts in relation to Lingo.

Train the Trainer Courses:

January 8-9, Chicago; January 22-23, New York; January 29-30, San Francisco

Day one covers fundamentals of creating multimedia productions. Day two goes into sound, color and working with third-party peripherals.

Tuition is $700 per workshop, students must be registered owners of MacroMind Director 2.0.

MacroMind Inc., 410 Townsend St., Suite 408, San Francisco, CA 94107; (415) 442-0200.

CD-ROM Technology: Implementation and Application

January 23-25, UCLA, Los Angeles

Course taught by Ash Pahwa, Ph.D., a Mind over Media contributor. Course addresses the development of CD-ROM applications, including CD-ROM architectures, ISO file structure, multimedia technologies, CD/I, DVI and CD-ROM/XA. Demonstration of important steps such as data preparation, file conversion into ISO 9660 file structure, premastering and the actual pro-

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duction of the CD-ROM using a 'one-off' (write-once machine).

UCLA Extension, 10995 Le Conte Ave., Los Angeles, CA 90024-2883. For technical information, call Dr. Ash Pahwa at (714) 733-3378, for registration, call the Short Course Program Office at (213) 825-3344.

Interactive Multimedia, 10-Day Intensive Workshop

January 28-February 8, Center for Electronic Arts, San Francisco

A two-week workshop for Mac-literate communicators who want to learn to design and create interactive multimedia projects. Participants will create interactive design examples with Mac software, videodisc, CD-ROM, audio digitizing, 3D modeling and animation, color slides and video sources. Tuition is $1,750; class is limited to 10.

Center for Electronic Arts, 329 Bryant St., Suite 3D, San Francisco, CA 94107; (415) 882-7063

Animation and Multimedia

March 1-2, Platt College, San Diego

Presents basic principals of sequential imagery using MacroMind Director. Emphasizes integration of scanned and drawn images combined with color, special effects and sound.

Platt College, Graphics Workshops, 6250 El Cajon Blvd., San Diego, CA 92115

Guide 3.0 Hypermedia Authoring

Ad-hoc courses at OWL International, Bellevue, Wash., or on-site.

The Basics — 3-day course introduces new users to Guide's capabilities. $2,400 at OWL headquarters, $3,000 on-site. Power Programming — 3-day course on Logiix programming. For application developers,

information managers and value-added resellers. $2,400 at OWL headquarters, $3,000 on-site. Comprehensive Authoring and Programming — 5-day course combining basics and power programming for students familiar with Microsoft Windows. $4,000 at OWL headquarters, $5,000 on-site.

OWL Training Center, 2800 156th Ave. SE, Bellevue, WA 98007; (206) 747-3203; fax (206) 641-9367.

Papers, Prizes
Orlando SALT Conferences

August 21-23, 1991, Arlington, Virginia

Call for papers for the Seventh Annual Conference on Applications of CD-ROM in Education and Training, the Thirteenth Annual Conference on Interactive Videodisc in Education and Training and the Seventh Annual Conference on Development of Interactive Instruction Materials. An abstract of 25 words and the title of the proposed paper or panel should be sent to the program coordinator by February 15, 1991.

Society for Applied Learning Technology, 50 Culpeper St., Warrenton, VA 22186; (800) 457-6812 or (703) 347-0055

Associations
International Interactive Communications Society

The IICS is an association of communications industry professionals dedicated to the advancement of interactive technologies. The society provides a forum for users, producers and vendors to share ideas, applications and techniques for effective use of interactive media.

National office: Debbie Palm, P.O. Box 1372, Lake Oswego, OR 97035; (503) 649-2065; fax (503) 649-2309.

Interactive Multimedia Association

(Formerly the Interactive Video Industry Association.)

The association's central mission is to expand the market for interactive products and services on behalf of its members by building public awareness, demonstrating the uses and values of interactive technologies and undertaking programs that could affect more widespread adoption of interactive media in all segments of the economy.

National office: 800 K St. NW, Suite 440, Washington, DC 20001; (202) 408-1000; fax (202) 408-0361.